Museum notes.

American Numismatic Society.

New York, American Numismatic Society.

http://hdl.handle.net/2027/mdp.39015005373835

HathiTrust

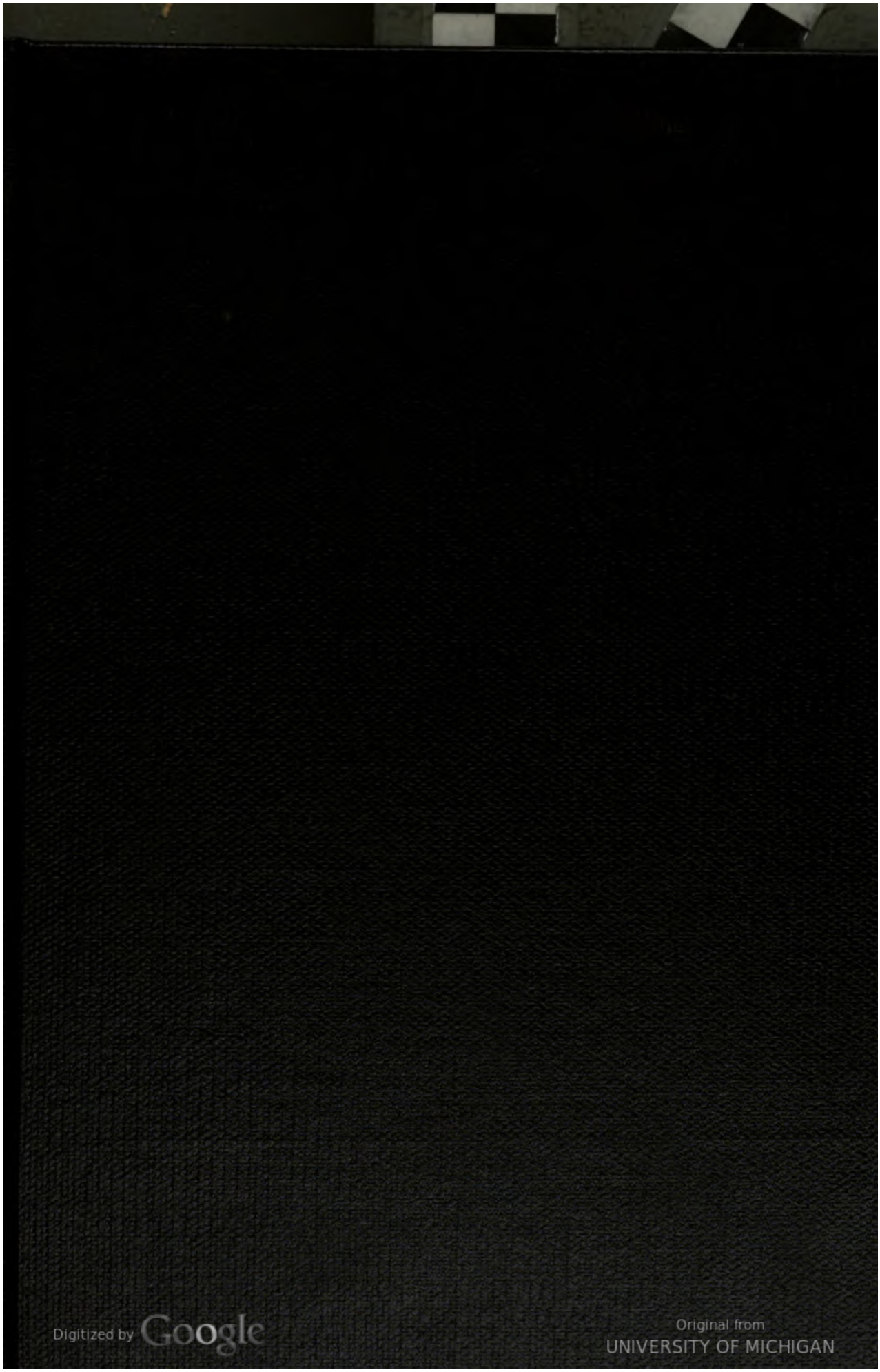
www.hathitrust.org

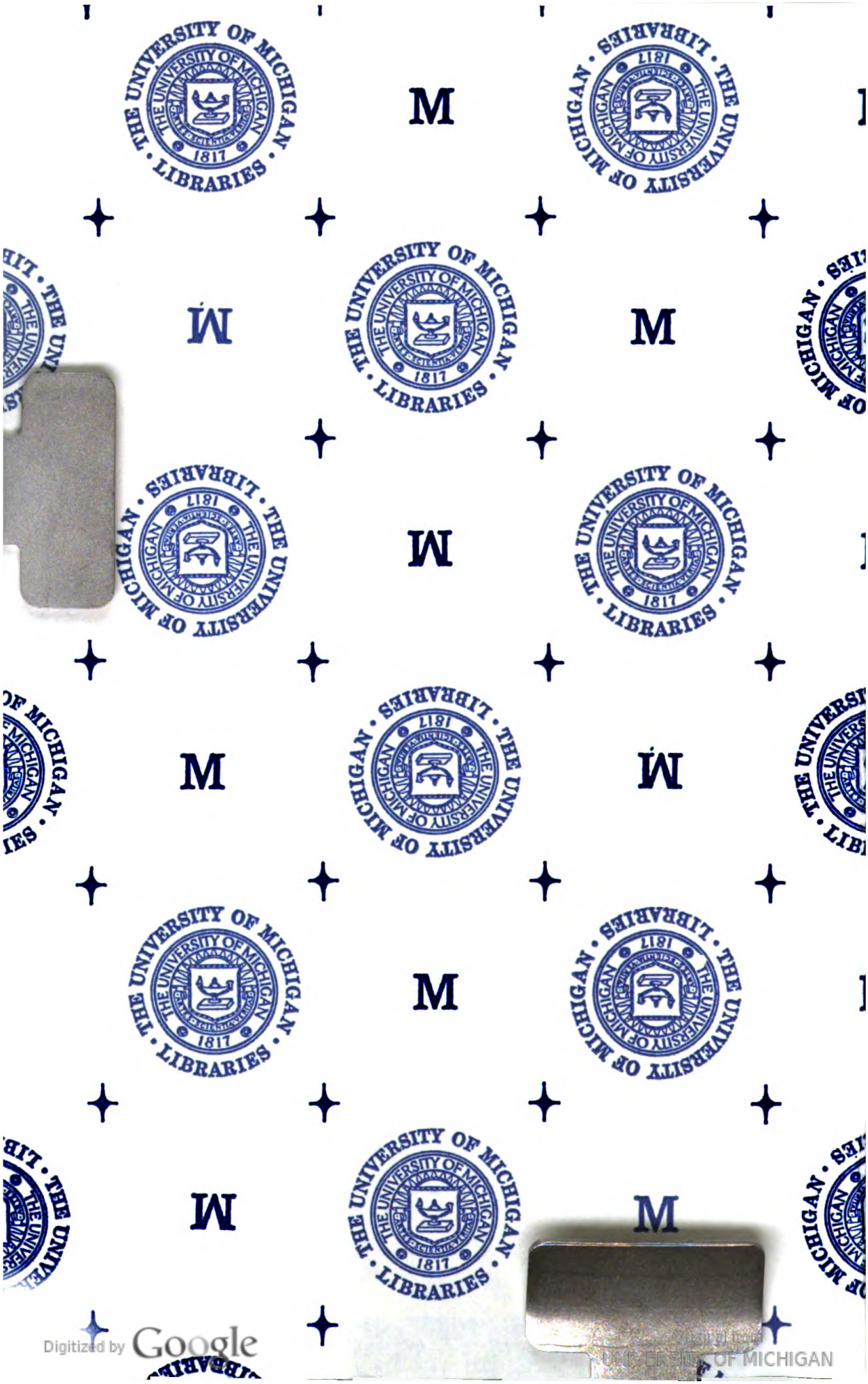
Creative Commons Attribution-NonCommercial-ShareAlike

http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

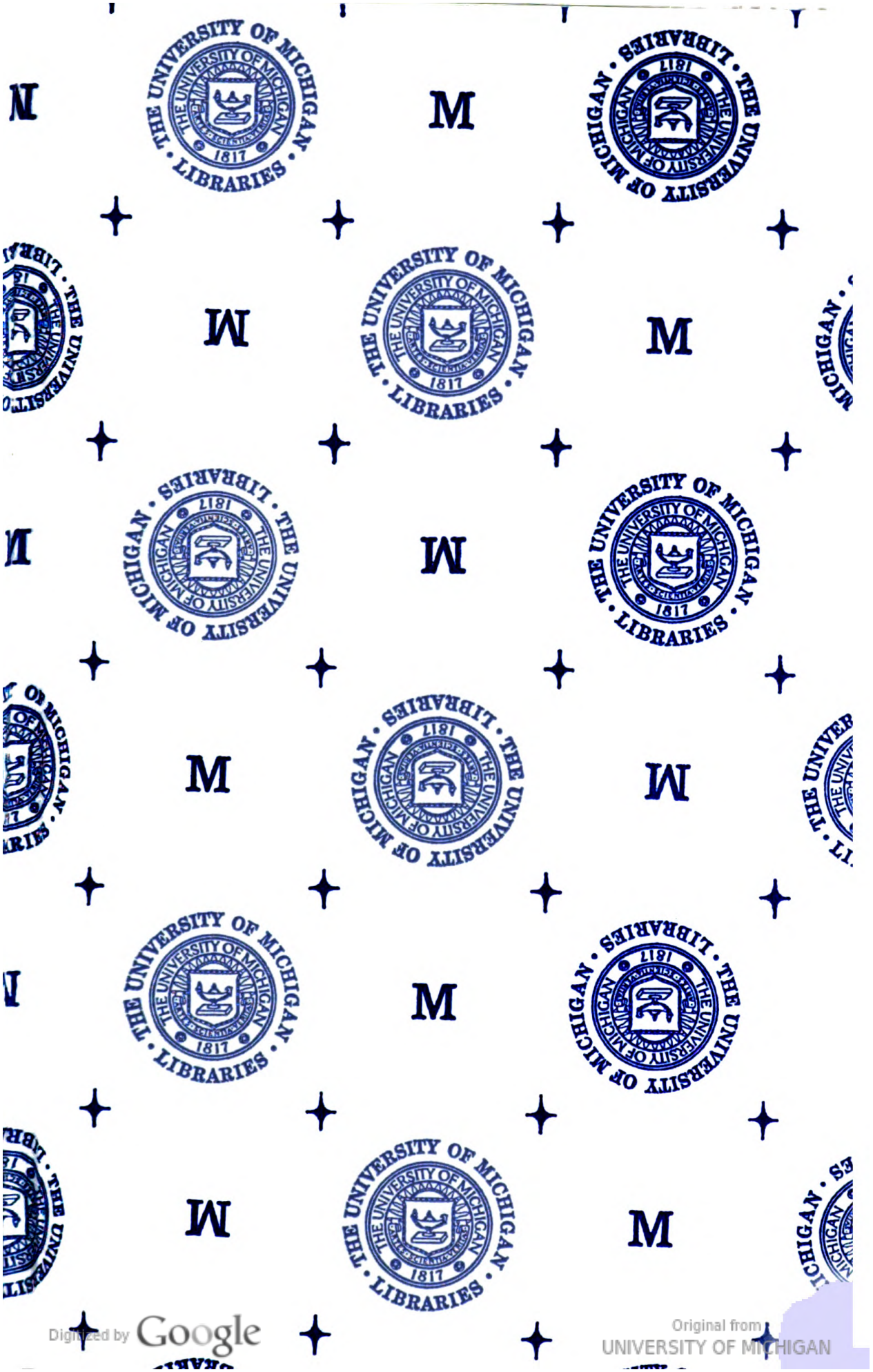
This work is protected by copyright law (which includes certain exceptions to the rights of the copyright holder that users may make, such as fair use where applicable under U.S. law), but made available under a Creative Commons Attribution-NonCommercial-ShareAlike license. You must attribute this work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work). This work may be copied, distributed, displayed, and performed - and derivative works based upon it - but for non-commercial purposes only (if you are unsure where a use is non-commercial, contact the rights holder for clarification). If you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license to this one. Please check the terms of the specific Creative Commons license as indicated at the item level. For details, see the full license deed at http://creativecommons.org/licenses/by-nc-sa/4.0.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0


Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Digitized by Google
UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

PRR

THE AMERICAN NUMISMATIC SOCIETY

MUSEUM NOTES

22

C-67



THE AMERICAN NUMISMATIC SOCIETY
NEW YORK
1977

FEB 27 1978

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

THE AMERICAN NUMISMATIC SOCIETY

Founded 1858 - Incorporated 1865

Broadway Between 155th & 156th Streets
New York, N.Y. 10032

PURPOSES: The Society was founded for the collection and preservation of coins, medals, decorations and paper money and for the investigation of their history and other subjects connected therewith.

MEMBERSHIP: Applications for membership are welcomed from all interested in numismatics. Inquiries regarding membership should be addressed to the Secretary of the Society.

DUES: The annual dues for an Associate Membership are $15.00. Issues of the *Notes and Monographs*, *Museum Notes* and *Numismatic Literature* are distributed to all members.

PUBLICATIONS: The American Numismatic Society Museum Notes is a scholarly journal containing articles on numismatic topics. The *Numismatic Notes and Monographs* consist of separately issued publications, each on a single topic. *Numismatic Studies* is a series accommodating works in a larger format. *Numismatic Literature*, published twice each year, is an international abstract bibliography of the current literature in the profession. The Society is also engaged in the systematic publication of its entire Greek coin collection in *Sylloge Nummorum Graecorum: American Numismatic Society.*

MUSEUM: The Society maintains a museum located in uptown Manhattan, New York City, which houses its offices, collections and library. Collections embrace coins of all periods from their inception to modern times, medals and decorations. Selections from its cabinets are on display in an exhibition. The library, consisting of about 25,000 volumes, covers all branches of numismatics.

The museum is open to Members and the public from 9 A.M. to 4:30 P.M. on Tuesdays, Wednesdays, Thursdays, Fridays and Saturdays. In addition, the public exhibition is open on Sundays from 1 to 4 P.M. The museum is closed on Mondays and the following holidays: New Year's Day, Lincoln's Birthday, Independence Day, Election Day, Thanksgiving Day, the fourth Friday in November, the fourth Saturday in November, December 24, Christmas Day. The public exhibition is open to the public from 9 A.M. to 4:30 P.M. on the fourth Friday and the fourth Saturday of November.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CJ
15
.A518

THE AMERICAN NUMISMATIC SOCIETY

MUSEUM NOTES

22

THE AMERICAN NUMISMATIC SOCIETY
NEW YORK
1977

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ALL RIGHTS RESERVED BY
THE AMERICAN NUMISMATIC SOCIETY

PRINTED IN BELGIUM AT CULTURA, WETTEREN

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CONTENTS

GREEK

FRIEDRICH BODENSTEDT. Observations on Some Early Electrum Types of Mytilene and Phocaea 1

HYLA A. TROXELL. Greek Accessions: Asia Minor to India 9

MARGARET THOMPSON. A Greek Imperial Medallion from Pautalia 29

JOHN J. SLOCUM. Another Look at the Coins of Hatra 37

ROMAN AND BYZANTINE

G. F. CARTER and T. V. BUTTREY. Chemical Compositions of Copper-Based Roman Coins, II: Augustus and Tiberius 49

WILLIAM E. METCALF. A Note on Trajan's Latin *Aes* from Antioch 67

WILLIAM E. METCALF. The Antioch Hoard of Antoniniani and the Eastern Coinage of Trebonianus Gallus and Volusian 71

ORIENTAL

RICHARD SALOMON. Western Kṣatrapa and Related Coins in the Collection of the American Numismatic Society 95

THOMAS S. NOONAN. The 1958 Dirham Hoard from Tartu in Estonia 135

MICHAEL L. BATES. The Coinage of the Mamlūk Sultan Baybars I: Additions and Corrections 161

PAUL BALOG. New Considerations on Mamlūk Heraldry 183

STEPHEN ALBUM. The Coinage of Nūr-Āward, Atabeg of Lur Buzurg, 751-57 H./A.D. 1350–56 213

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

MODERN

J. D. Brady. Rediscovery of Joseph Wright's Medal of George Washington 241

Dexter C. Seymour. The 1830 Coinage of Templeton Reid 267

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

GENERAL BOOKBINDING CO.
QUALITY CONTROL MARK

OBSERVATIONS ON SOME EARLY ELECTRUM TYPES OF MYTILENE AND PHOCAEA

(PLATES 1–2)

FRIEDRICH BODENSTEDT

Among the rich holdings of eastern Greek electrum coins at the American Numismatic Society is a hecte of Mytilene which, as far as I have been able to determine, has not yet been published.[1] Its description follows:

MYTILENE ca. 460/455 B.C.

Obv.: Bull protome r., head turned toward viewer, revealing tip of left ear; r. foreleg bent, l. thrust forward.

Rev.: Lion head (incuse) with open jaw (tongue and teeth are not represented). At neck truncation is a rectangular incuse with a delicate dividing line across middle.
Electrum hecte 2.525 g Specific gravity 11.99

(PLATE 1, 1)

This splendidly-preserved hecte is interesting in a number of respects. In subject matter it revives the coin types of the earliest hecte issue at Mytilene (ca. 520 B.C.; PLATE 1, 2).[2] Comparison plainly reveals the change in style that has occurred in the two generations dividing these issues. The unnatural positioning of the forelegs on the prototype—neither of them touching the ground—was not adopted by the later hecte; the latter example is oriented, rather, in accordance

[1] All illustrations were photographed by the author except where noted.
[2] Private collection; I am indebted to the owner for the illustration.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

with the running attitude of the winged boar protome (ca. 510 B.C.; PLATE 1, 3)[3] where the left foreleg is thrust forward. The folds of the bull's neck also convey a more natural impression. On the earlier hecte the folds are carried all the way to the nape and back to the ridge of the back; these features, together with the stiffly-posed horn and the springing attitude of the forelegs, convey the sense of wildness. On the ANS specimen, the horns are rendered flat, almost like those of a water buffalo. The head is modelled in sharply-differentiated planes with readily distinguishable nostrils and forelocks and presented in three-quarter view, an element that makes its appearance in Greek art in the period of severe style. This quality places the work at not earlier than 460 B.C.; and we must acknowledge that our die engraver has done a very good job.

The incuse type of the reverse provides a further peg for dating. This die engraving technique was supplanted ca. 455 B.C. by reverse dies having types in raised relief within an incuse square.[4] Accordingly, the hecte in the ANS collections would have been struck between 460 and 455 B.C.

While the plastic style of the obverse type is in very good harmony with this date, the mane of the reverse faithfully imitates that of the lion head illustrated by PLATE 1, 3. The modelling of the head is inferior to be sure: the head is emphatically vaulted; the snout is drawn too short; the eyes are screwed up too tight; and tongue and teeth are lacking. One cannot say whether the hemispherical elevation inside the lower lip is to represent the tip of the tongue or the stump of a fang. All in all, it is the head of a passion-stricken tomcat that looks out from the pompous mane. The neat and subtly-fashioned incuse rectangle with its delicate central line (generally speaking the incuse is no longer in use by this date) confirms the impression of an archaizing and, as always, not quite successful repetition of a prior coin type. The Boston lion type (Brett, *MFA* 1687) of the period ca. 465 B.C. (PLATE 1, 4)[5] presents the actual conception of a lion's head in this

Mytilene, electrum hecte. *De Luynes* 3, no. 2547.

[4] See my detailed comments in "Studien zur Elektronprägung von Phokaia und Mytilene," *SNR* 52 (1973), p. 27–29.

[5] Mytilene, electrum hecte (photography by S. Hurter).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

generation. Croesus of Lydia was perhaps the first to set together upon his coins the symbols of primordial strength and fertility in his use of the lion and the bull.[6] Cyrus and Cambyses went on striking these gold and silver coins until the daric and the siglos supplanted them. Samos selected the bull and the lion for the first time in 522 B.C.[7]—perhaps even under Polycrates shortly before his violent end—for its coinage struck on the "heavy Samian standard." Mytilene characteristically appropriated these coin types ca. 520 B.C. for its first hecte issue, probably for reasons of commercial policy.[8] As the ANS specimen demonstrates, Mytilene again selected these motifs two generations later. This took place in a decade when the anthropomorphic divinity image was conquering the obverse at Mytilene (ca. 465-455 B.C.) as it had already done elsewhere with the heads of Heracles (Babelon, *Traité*, pt. 3, pl. 159, 21), Athena (Brett, *MFA* 1683), Apollo (Brett, *MFA* 1690/91), and the magnificent three-quarter facing Silenus (Bodenstedt, pl. 9, E1), among others.

We find animal images twice more during the 440s: the boar protome as a beast of sacrifice (Brett, *MFA* 1648) and the goat (Brett, *MFA* 1682).[9] The last animal figure on electrum from Mytilene, the protome of a winged lion, appears ca. 410-400 B.C. on the obverse of a sharply-struck example preserved at Paris (PLATE 1, 5).[10] Here we are again dealing with an unequivocally archaizing repetition of an issue in the British Museum (*BMCLesbos*, pl. 31, 26; our PLATE 1, 6).[11] The expression on the lion's face on the former is downright amusing, like a caricature, as a comparison of the illustrations will show. With this coin we are in the last decade of the fifth century, a time when the expressive forms of the archaic period were frequently being recalled and

[6] *BMCLydia*, pl. 1, 14–20.

[7] J. P. Barron, *The Silver Coins of Samos* (London, 1966), p. 174 and pl. 5.

[8] On this point see my detailed comments in "Studien," p. 34.

[9] Reverse is an owl with outspread wings, again an archaizing reminiscence, this time of the Athenian decadrachms. The goat and the owl were the creatures sacred to Hermes and Athena, and it is surely not by chance that in ca. 365 B.C. we also find an anthropomorphic representation of these two divinities brought together on a Mytilene hecte issue (Brett, *MFA* 1733/34).

[10] BN, Inv. no. 265 (not illustrated in Babelon, *Traité*, vol. 2, pt. 2, no. 265).

[11] Mytilene, electrum hecte, ca. 505 (photography by S. Hurter).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

an effort was being made to experience them anew. It is notable that in the almost continuous succession of Mytilene electrum hectes we can recognize deliberate retrogressions to the motifs and expressive forms of past generations, in 460-455 and again in the early 440s and in the final decade.

Another well-preserved hecte of Mytilene now in the ANS merits attention since it provides a conclusive identification of the female head on the reverse:

MYTILENE ca. 405 B.C.

Obv.: Head of Ares, bearded.

Rev.: Head of an Amazon, helmeted, wearing Thracian leather helmet with knob attached by rivets, cheek guard, and brow reinforcement, with hair flowing behind.[12]
Electrum hecte 2.59 g (PLATE 2, 7)

Former descriptions of the reverse are conflicting:

Brett, *MFA* 1711: "Female head (Aphrodite?) r. in sakkos with button on crown of head, below which a plain and a dotted band; small projecting ornaments above forehead; loose locks of hair on neck . . ."

Babelon, *Traité*, vol. 2, pt. 2, no. 2196, pl. 160, 36–37: "Tête casquée d'Athéna, à droite, les prognathides relevées, le sommet terminé par un bouton . . ."

Babelon, *Traité*, vol. 2, pt. 2, no. 2197, pl. 160, 38: "Tête de nymphe, à droite, les cheveux relevés et noués au sommet de la tête . . ."

BMCLesbos Electrum no. 94, pl. 34, 8 and nos. 95–97, pl. 34, 9–11: "Female head r., hair in sakkos . . ."

A second blow with a separate plain punch die, which was at that time common in Mytilene, is to blame for this lack of clarity. In the

[12] See Bodenstedt, p. 42, M24.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

process of striking, the ovate blank was placed on the sunken anvil die. At Mytilene the first blow was done with a square, engraved punch die, *smaller* than the blank. Thus the metal of the blank was pressed into the intaglio type of the anvil die. At the same time the blank received the incuse square with the raised reverse image. The second blow was done with a separate, plain circular punch die, having a diameter *larger* than the blank. The purpose was to flatten the border zone of the blank, not affected by the smaller square punch die. As a consequence, the raised image in the reverse incuse was more or less flattened out, whereby many details were lost.[13] The reverse of this coin, together with a drawing prepared by the author (Fig. 1) show the decisive details:

1. The knob of the helmet, which was flattened with rivets
2. The cheek protection, flapped upward
3. The brow reinforcement
4. The neck protection



Fig. 1

Thus, without any question, a helmet is represented here, as Babelon had already noted (above). The riveted neck protection which is recognizable on the ANS specimen now demonstrates that it is not a bronze Attic helmet which is involved here, but rather a Thracian one of leather, closely molded to the head with bronze attachments.

Such a helmet, with the leather relatively well-preserved, was found in the Thracian princely grave of Golemata Mogila near Duvanlij and has been described and illustrated by Bogdan B. Filow.[14] The bronze neck protection from Duvanlij is ornamented with volutes. On the ANS hecte, too, we note a raised ornamentation on the neck protection, the details of which, however, are not recognizable. The cheek flaps from Duvanlij have a cut-out for the ear which we similarly find in the cheek flap on the ANS coin.

[13] Bodenstedt, pp. 19 and 50.

[14] B. B. Filow, *Die Grabhugelnekropole bei Duvanlij in Sudbulgarien* (Sofia, 1934), figs. 137, 138.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

We can then say with assurance that our coin type presents a female head in a Thracian leather helmet with bronze fittings. The enlarged detail (PLATE 2, 7) enables us to see a large attribute behind the neck, perhaps engraved in the die only after it had been hardened, which reminds one of the upper quiver section on the Phocaea hecte in *BMCIonia*, pl. 5, 6 and 7. But even without this attribute, a female head wearing a Thracian leather helmet would doubtlessly point to an Amazon.

Of this reverse die we have a number of variants in which not only the forward inclined head, but also the flowing strands of hair beneath the neck guard (PLATE 2, 8)[15] show that the artist has represented the Amazon in lively forward motion, as perhaps on horseback. This motif is quite appropriate for an Amazon, but unusual for an Athena and inconceivable for an Aphrodite. The helmeted, bearded head of Ares on the obverse is also appropriate as a type accompanying an Amazon head. Ares was recognized as the principal god of the Amazons, and we cannot be surprised by the use of the Amazon as a Mytilene coin type for, according to a myth reported by Diodorus 3.55.7 (significantly on the authority of one Dionysos Scytobrachion of Mytilene who wrote ca. 150 B.C. at Alexandria), the city was founded by an Amazon of that name.

I have only recently become acquainted with another variant of this reverse (PLATE 2, 9)[16] where a female head with a Nike hairdo is depicted in place of an Amazon. Judging from the facial expression of Ares on the obverse these dies were cut by another artisan who had misunderstood the helmet knob of the prototype as the knotted hair of the Nike coiffure, and the brow reinforcement of the helmet has become a lock projecting obliquely upward.

I may add here a few observations with respect to the electrum of Phocaea as well as Mytilene made while examining further collections in the United States:

A) A specimen from Mytilene in an American private collection (PLATE 2, 10)[17] is similar to Brett, *MFA* 1735, but the small torch behind the

[15] Mytilene, electrum hecte, ca. 405, Paris. Babelon, *Traité*, pl. 160, 36.
[16] Mytilene, electrum hecte, ca. 405, Munich, cat. no. 43.
[17] Photography by L. Goeppner (from a plaster cast).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

female head, recognizable now for the first time, characterizes the head as that of Persephone or Hecate who are closely associated with the Samothracian mysteries of the Cabeiri. I have subsequently found the torch on the Berlin specimen of this issue from the Imhoof-Blumer collection and on a specimen in a Zurich private collection. Since no trace of the torch is to be discerned on many well-centered and sharply-struck examples from the same dies, it was probably engraved into the already hardened die only as an afterthought, which would also explain the rather flat and somewhat imprecise cutting.

B) PLATE 2, 11 illustrates a Phocaea hecte of ca. 380 from the Garrett collection in Baltimore. The photograph discloses a detail that obviates the uncertainty hitherto existing in the description of the female head. The Boston (MFA) specimen is described: "Head of a maenad to left . . . snakes (?) or vine stems in her hair, which is held by a sphendone;"[18] *SNGvAulock* 2130: "Kopf des jugendlichen Pan im Efeukranz, links; "*BMCIonia*, pl. 5, 18: "Female head left, wearing earring, hair in jewelled net."

The rings which can be perceived on the hair gathered at the back of the head, and which have been variously described as coiling snakes, vine stems, and jewels, in reality render an encircling net whose draw ribbon is visible from ear to neck quite as it is in the Arethusa of Kimon's famous decadrachms of Syracuse. The MFA die (PLATE 2, 12)[19] is artistically the best by reason of the charm of the head, but it allows the rings of the hair net to be only suspected since the high contour—another heritage from Kimon—is well worn at this point. The well-preserved example in a Zurich private collection (PLATE 2, 13) does permit one to see the four rings of the hair net distinctly, but not the ribbon that encompasses them. Only the Baltimore die has brought us proof that an encircling net is intended and that we have before us in this Phocaea issue a late yet unmistakable imitation of Kimon's Arethusa.

In summary, at Phocaea and Mytilene one can observe that certain details in the prototype die are frequently misunderstood and altered in the later substitute dies which are recut by other hands.

[18] *MFASuppl.* 176, pl. 17.
[19] Photography by S. Hurter.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

GREEK ACCESSIONS: ASIA MINOR TO INDIA

(PLATES 3–4)

HYLA A. TROXELL

Notable accessions to the Greek cabinet of the American Numismatic Society are reported each year in the *Annual Report* but some pieces require more discussion than can be included in these yearly summaries. Occasional notes in *ANSMN* serve this purpose.[1] The present article describes 15 accessions acquired over several decades.

MYSIA: PERGAMUM: PHILETAERUS

1. *Obv.*: Head of deified Alexander r.

   Rev.: ΒΑΣΙΛΕΩΣ ΛΥΣΙΜΑΧΟΥ Athena seated l., holding Nike and resting arm on shield decorated with star within three concentric circles, the middle one dotted, the others linear; to outer l., Π; to inner l., cult image.

   Æ Test piece ↓ 20.61 g (broken) (PLATE 3, 1)
   Purchase, 1969.

The heavy weight of this striking, even after a piece has broken off, shows that it is a test piece rather than a core for a plated coin. Plated coins are in any case virtually unknown among coins with Lysimachus types; the die axis orientation of this piece is also the opposite of that standard in Lysimachus's coinage. Test pieces are normally of the softer metal lead, but this one, with its intense green patina, is undoubtedly copper or an alloy of copper. A test scratch reveals a pale pink, the color of a newly-polished penny; it is very likely then of pure

[1] M. Thompson, "Some Noteworthy Greek Accessions," *ANSMN* 12 (1966), pp. 1–18; N. M. Waggoner, "Three Recent Greek Accessions," *ANSMN* 21 (1976), pp. 1–9.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

or nearly pure copper, which would be sufficiently soft for an easily-struck blank.

The types and inscription of this piece are, of course, precisely those of Lysimachus, and its markings are very close to those of a known issue of that ruler from Pergamum.[2] In addition to the two reverse markings, a K appears in this issue below the neck on the obverse (a corroded area on our piece), and a crescent in reverse exergue, a symbol definitely not present on our piece. This issue was the last struck by Lysimachus at Pergamum, coming just before the revolt of Philetaerus in ca. 282 B.C.

The dies for our piece are not among those known for Pergamum under Lysimachus, but its obverse is very close indeed to the last one known, the one used for issue 229 (PLATE 3, A: an ANS coin from this issue). This resemblance would probably suffice to place our test piece directly after the cessation of Lysimachus's Pergamene coinage, but another and more important clue is provided by the small detail of the decoration of Athena's shield on the reverse: the star within concentric circles.

Invariably, as far as this author can determine, Lysimachus's lifetime coins have a lion head decorating the shield, the lion forepart or head being an especial personal symbol of Lysimachus.[3] After his revolt from Lysimachus, Philetaerus turned to Seleucus I for protection, and for a few years struck coins with types differing from those of Lysimachus with the name of Alexander or Seleucus. Around 274 Philetaerus reintroduced the Lysimachus reverse type of seated Athena, with minor changes in position—and with a significant change in the shield boss.[4] The Lysimachus lion head is not seen again at Pergamum: Philetaerus and his Attalid successors, who repeated his types for decades, use instead a gorgoneion.

Our piece is similar to the late coinage of Lysimachus at Pergamum, and, bearing his name, was probably struck shortly after 282. A star

[2] M. Thompson, "The Mints of Lysimachus," no. 229, in C. M. Kraay and G. K. Jenkins, eds., *Essays in Greek Coinage Presented to Stanley Robinson* (Oxford, 1968), pp. 163–82.

[3] Thompson, "Lysimachus," p. 165 and throughout the catalogue.

[4] See E. T. Newell, *The Pergamene Mint Under Philetaerus*, ANSNNM 76 (New York, 1936).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

is found as symbol on the Lysimachus Pergamene issues and on some of the earliest issues of Philetaerus. The star is used as a type on Pergamene bronze of the period of Lysimachus and on the bronze of Philetaerus; as countermark on Pergamene bronze of Attalid times and later.[5] The replacement of the lion head shield boss by a star can only be deliberate, and must refer to Philetaerus's new independence.

The proposed change in the coinage indicated by this test piece was, rather understandably, not deemed sufficiently drastic; the first coinage of Philetaerus broke away altogether from those of Lysimachus.

IONIA : EPHESUS

2. *Obv.*: ΕΦΕΣΙΟΝ around bee; dotted border.

Rev.: Quadripartite incuse square.
AV Stater (daric standard) 8.37 g (PLATE 3, 2)
J. Scholz, *Collection Ernst Windisch-Grätz*, 5 (Prague, 1899), no. 1597. Bequest of Adra M. Newell, 1967 (formerly Edward T. Newell Collection).

Excessively rare staters such as the one published here, together with corresponding half staters and sixth staters, have been known since the first half of the nineteenth century. Heated controversy over their authenticity, however, developed by the middle of the century and continued to its end. The coins were condemned as forgeries by many scholars, including B. V. Head in his study of the Ephesian coinage,[6] and they were completely ignored in major subsequent publications as *BMCIonia* and both editions of the *Historia Numorum*..

The small gold series was restored to respectability by E. Babelon in his *Traité*, vol. 1, published in 1901.[7] He showed that they are the previously unrecognized *θιβρώνειον νόμισμα* of Photius: *θιβρώνειον νόμ-*

[5] Newell, p. 11.

[6] B. V. Head, "On the Chronological Sequence of the Coinage of Ephesus," *NC*, n. s., vol. 20 (1880), pp. 106–7, n. 3.

[7] Babelon, *Traité*, vol. 1, pt. 1, pp. 474-78, with earlier bibliography on the question of the coin's authenticity. Babelon largely repeats arguments he advanced earlier in 1893; see his *Mélanges* 2, pp. 313-22.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ισμα ἐδόκει ἀπὸ θίβρωνος τοῦ χαραξάντος εἰρῆσθαι. At one stroke the "Thibronian money" was identified and the anomalous Ephesian gold vindicated and placed in its proper historical context.

Thibron, the Spartan harmost, commanded a large Greek force in Asia, sent there in 401 B.C. to combat the satrap Tissaphernes. Ephesus was Thibron's headquarters during his stay in Asia, and darics were the means of payment to his troops. His forces were enlarged by the recruitment of the last remnants of Xenophon's Ten Thousand; Xenophon reports that the payment offered by Thibron was expressed in darics.[8] Thus the strange standard of our piece is explained: it was military money, struck ca. 400 B.C. by Thibron at Ephesus in order to pay a Greek army accustomed to payment in gold darics.

Babelon in a later volume of the *Traité* published the three gold denominations, but did not illustrate any of them on his plates.[9] The fractions have never been illustrated, to my knowledge, and they have apparently dropped from sight. Our stater was published and pictured in the Windisch-Grätz collection, and a second stater from different dies was published in the Jameson Collection,[10] but the *θιβρώνειον νόμισμα* remains virtually unknown.

IONIA: PRIENE

3. *Obv.*: Head of Athena r., wearing triple-crested Attic helmet, the bowl adorned with tendrils and a Pegasus.

   Rev.: ΠΡΙΗΝΕΩΝ ΑΚΡΙΣΙΟΣ Bias of Priene standing facing, holding staff in r. hand; to r., tripod.

   Æ Didrachm ↑ 8.29 g (PLATE 3, 3)
   Purchase, 1967.

Silver coins of Priene are relatively rare, and the second-century Attic weight silver coins excessively so. None, for instance, are known

[8] Anabasis 7.6.1; wrongly cited in Babelon.

[9] Babelon, *Traité*, vol. 2, pt. 2, nos. 1879-81, with earlier bibliography. No. 1879 cites ANS coin.

[10] Jameson, *Cat.* 3, no. 2263.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

to the *Historia Numorum*. When, just 50 years ago, K. Regling published his compilation of the coins of Priene,[11] he listed three Attic-weight silver issues, all drachms, of the second century—and for all three issues he knew but four coins.[12] Two issues (28 and 29) he dated to ca. 190–170 B.C.; the third (30), known from a single coin, he considered struck about 150 B.C.

The new didrachm published here is the largest known autonomous silver coin of Priene. It is the double denomination of Regling's drachm issue 30, with precisely the same types and inscription. Regling associated his issue 30 with the abundant bronzes of Priene which repeat the Athenian New Style coinage types of Athena head and owl on amphora within wreath. The Athena head of the drachm issue, small as the coin is, echoes many details of the Athenian heads; but our didrachm shows two further points of similarity: the dotted border of the helmet flap and, more important, the Pegasus surmounting the bowl. The only feature of the Athenian coins not found on the didrachm is the horse protomes above the visor; on the didrachm as well as the drachm they are missing, no doubt because of the coins' relatively small size. The Prienian coins have instead vertical stripes on the visor, which Regling took for a row of olive leaves.

It seems impossible to find in the Athenian coinage the exact issue or die copied at Priene, but the prototype of our coin can hardly be much later than the ΚΑΙΡΑΧ-ΕΡΓΟΚΛΕ and ΑΦΡΟΔΙΣΙ-ΔΙΟΓΕ issues, for after this the necklace is very rarely present, and the tendrils' placement on the helmet bowl varies. These issues are dated by Thompson to 153–152 and 152–151 B.C.[13] The latter's die 544, with necklace portrayed, tendrils originating at the back of the helmet, pointed helmet flap, visor indicated by a double line, and separate

[11] K. Regling, *Die Münzen von Priene* (Berlin, 1927).

[12] A second example of issue 28, a die duplicate of Regling's coin, has since appeared: *SNGvAulock* 7965 (Hess-Leu [4 May 1976], 302; now in the Wintherthur cabinet). Regling's issue 31 is a fourth Attic drachm issue, struck perhaps in the middle of the first century B.C. Again, only one coin was known to Regling, but a cast of a second is at the ANS; seen in trade a few years ago, it was a die duplicate weighing 4.19 g.

[13] M. Thompson, *The New Style Silver Coinage of Athens*, NS 10 (New York, 1961), pp. 205–9.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

curls of hair under the helmet flap, is perhaps as close as any to our coin, but the resemblance is not so exceptional or exclusive as to rule out earlier dies and issues as models for the Prienian coins.

With the portrayal of Bias on the reverse can be compared representations of other native sons on Hellenistic coinages from Ionia: for example, Homer at Colophon and Smyrna, and Anaxagoras at Clazomenae.[14] Bias with tripod is also found on later bronzes of Priene,[15] and his head alone, identified as BIAC, on still others.[16] That Bias is *turning away* from the tripod is clearer on the bronzes than on our coin, and it has been suggested that the scene portrays a specific story: a tripod inscribed τῷ σοφῷ or τῷ σοφωτάτῳ had been recovered from the ocean and brought to Bias, who declined it, saying that it must be given instead to Apollo.[17] Most probably the scene portrayed reproduced a statuary group in the Bianteion at Priene.

CARIA: CHERSONESUS

4. *Obv.*: Bull protome r.

   Rev.: Gorgoneion in square frame of two dotted lines; all in incuse square.

   Æ Hemidrachm (Aeginetan standard) ↖ 2.44 g (PLATE 3, 4)
   Purchase, 1967.

This coin provides an example of the importance of recording archaeological finds. Uninscribed, with banal types, the coin's attribution would be quite uncertain were the context of its discovery unknown. But it came from the Datça, Caria, find of 1966—a hoard composed chiefly of coins of Carian Chersonesus, together with some fractions of its larger neighbor Cnidus.[18] That this coin is a striking of Chersonesus

[14] *BMCIonia* Colophon 42-43; Smyrna 7-8 and 79-117; Clazomenae 102-4.

[15] Regling, nos. 172–73, 186.

[16] Regling, nos. 184–85.

[17] Regling, p. 95, crediting F. Imhoof-Blumer in *Kleinasiatische Münzen* (Vienna, 1901-2), p. 94, no. 3.

[18] *IGCH* 1174.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

is thus most probable. It also presents both a new type (the gorgoneion) and a new denomination for this mint.

H. A. Cahn has recently compiled the coinage of Chersonesus. First came tetartemoria with lion head obverses and bull protome reverses. Thereafter a lion protome, as on the coinage of Cnidus, became the standard obverse type and the bull protome, sometimes varied by facing bucranium, the standard reverse type: on staters dated by Cahn to ca. 510–480 B.C., and on drachms, trihemiobols, and obols dated to ca. 480–450 B.C.[19] The trihemiobols present the only variation in Cahn's compilation from the standard types; they have a unique type for the mint, a winged boar, on obverse.[20]

As a number of Cahn's coins in various denominations are uninscribed, lack of inscription on the ANS coin is no barrier to its attribution to Chersonesus. One wonders, however, if our triobol does not belong with the staters, ca. 510–480 B.C., rather than with the drachms and other fractions. Its obverse bull protome is far closer in size and depth of relief to those of the staters[21] than those of the drachms, and one of the staters is the only coin in Cahn's compilation to present a dotted border, such as the ANS coin has.[22] Here also may possibly belong the trihemiobols, a denomination which would seem more useful in a coinage of staters and triobols than in one of drachms and obols. If struck at the time of the drachms and obols, the unique types of the triobols and trihemiobols would of course have distinguished them from the obols; but these unique types would have been of equal value earlier also, in distinguishing them from the first coinage of tetartemoria by Chersonesus.

LYCIA: UNCERTAIN DYNAST

5. *Obv.*: Ketos l., with small horn, large ears, beard, mane, and two scrolls (only the bottom of larger one preserved) hanging from back of head; body is beaded above and below with

[19] H. A. Cahn, *Knidos*, AMUGS 4 (Berlin, 1970), pp. 200–11.
[20] Cahn, p. 206, no. X25.
[21] Cahn, p. 204, nos. X6–X11, pl. 9.
[22] Cahn, p. 204, no. X9.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

one fin above, two below, and a bifurcate tail; all on a circular raised shield with beaded border.

Rev.: Same type, smaller, in incuse square with beaded border.
℞ Stater ↑ 9.30 g (PLATE 3, 5)
Intermediate Lycian weight, apparently overstruck although the undertypes cannot be determined. Purchase, 1971.

The coin is from a small hoard which appeared on the European market in 1971. Reportedly found in Turkey, it almost certainly must have been interred somewhere in Lycia, where its coins were struck. A recent notice of the hoard lists thirteen coins, three of our issue;[23] six or seven of our issue, however, were noted by an individual who saw the hoard, or at least a portion of it, in trade in 1971.[24]

The hoard contained five stater issues, three known (sphinx-sphinx, sphinx-crab, and lion-Pegasus protome),[25] and two new. Our coin is from one of the new issues; it and two others, both die duplicates,[26] are the only recorded coins of this new issue.

The other new issue also has the same type, in this case a crab, on both obverse and reverse. Two of these coins bore a single marking below the reverse crab: ⋎ . This character resembles a Cypriote *upsilon*; it is not found in the Phrygian, Lydian, Lycian, or Carian scripts.[27] It is not known among the signs or monograms (as distinct from letters) which appear on early Lycian coins, but such would seem to be the only possible explanation of the character. Two more crab-crab coins bear a Lycian personal name, engraved retrograde, on the reverse; one of the sphinx-crab hoard coins is engraved on obverse

[23] *Coin Hoards*, 2 (1976), no. 18. One more ketos-ketos and one more sphinx-sphinx coin are now known to be in a private collection.

[24] Private communication.

[25] The association of these three issues has already been hinted at: examples of each were catalogued together by O. Mørkholm in *SNGvAulock* 4084–86.

[26] Hess-Leu 49 (27 April 1971), 233 (the best preserved), and Kölner Münzkabinett (22 April 1971), 47e. Both are overstruck, as ours, and their undertypes are also uncertain.

[27] The coins: Kölner Münzkabinett 47c-d (die duplicates). On the marking, see H. Jensen, *Die Schrift in Vergangenheit und Gegenwart* (Berlin, 1958), pp. 443–54.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

with what appears to be another personal name, abbreviated, also in the Lycian alphabet.[28]

Our ketos coin belongs to the large group of uninscribed two-type coins struck by uncertain Lycian dynasts. This group may have commenced ca. 500 B.C., and its terminal date has recently been set at ca. 440 B.C. by Mørkholm.[29] Our coin's hoard association with epigraphic coins might seem to place it in the later part of this period. Coins of two of the hoard issues appeared in the Asyut Hoard, however, buried ca. 475 B.C.,[30] so that ca. 480–460 B.C. is a preferable date for our charming ketoi.

Fifth-century Lycian coins were struck to a number of differing weight standards, which Mørkholm has shown to be due not to chronology but to geography.[31] A light standard was used in the west, in the Xanthus valley, and a heavy standard at Antiphellus and presumably other mints on the south coast. All the hoard weights known to this author fall squarely within an intermediate range, whose area of use remains undetermined.

CILICIA: CETIS (?)

6. *Obv.*: Ketos r. (l.?), partially preserved; to l., Λ.

   Rev.: Four-pointed starlike central pattern surrounded by a four-sided frame of three incurvate parallel lines, the middle one dotted.

   Æ Stater (Persic standard) 6.13 g (cut down) (PLATE 3, 6)
   Found in Egypt. Bequest of Edward T. Newell, 1941.

[28] I am indebted to Otto Mørkholm for the details of these last Lycian inscriptions, which are to be published by him and Günter Neumann in an article collecting all known coin inscriptions in Lycian.

[29] O. Mørkholm, "The Classification of Lycian Coins Before Alexander the Great," *JNG* 14 (1964), pp. 68-69.

[30] M. Price and N. Waggoner, *Archaic Greek Silver Coinage. The "Asyut" Hoard* (London, 1975), nos. 761 and 772–73.

[31] Mørkholm, pp. 69-71; O. Mørkholm and J. Zahle, "The Coinage of Kuprlli," *Acta Archaeologica*, 43 (Copenhagen, 1972), pp. 71-75.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

7. *Obv.*: Ketos r., with long thin body, no fins, tail off flan; large head with ears but apparently no horns, with long open jaws.

Rev.: As 6, rays of the star indicated in outline, with a separate central rib. Frame enclosed in linear circle. To l., K, below which, the top of a vertical stroke, which must be an I; below, the upper part of a slanting stroke, apparently a portion of a third letter.

Drachm (Persic standard) ↗ 4.91 g (PLATE 3, 7)
Gift of Bank Leu, 1968.

No. 6 has long been in the ANS trays. Newell, unable to know its original weight, had labeled it "Phaselis? or Cypriote?" Presumably he saw a resemblance between the remains of the ketos and the curving prows of early Phaselitan staters; he could hardly have recognized the ketos.

The appearance of no. 7, with the same types, shows that no. 6 was originally a stater of Persic weight. The combination of stater and drachm is interesting. The Persic standard was widely used in the fifth and fourth centuries, the general period to which our coins belong, in Thrace and Macedon and in numerous areas of western and southern Asia Minor subject to Persian control. Persic drachms were struck by mints along the west coast, from Mysia to Ionia. Persic staters were struck in northern Greece and along the south coast of Asia Minor with few exceptions only from Phaselis, on the Lycian-Pamphylian border, eastward. The drachms were virtually never minted along with staters; when a smaller denomination accompanied the staters, it was the tetrobol. Aspendus in Pamphylia seems to have been the only mint to have issued Persic staters and drachms concurrently, ca. 410–375 B.C.[32] Our uncertain mint may reasonably be sought in this same general area and period.

[32] Mørkholm assigns the drachms (for example, *BMCLycia* Aspendus 10–13) to this period, accompanying the earliest wrestler-slinger staters from Aspendus (N. Olçay and O. Mørkholm, "The Coin Hoard from Podalia," *NC*, 7th ser., vol. 11 [1971], p. 29).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The types are of little help in attributing our coins. Ketoi are most frequently found at Itanus in Crete;[33] they are also found on the new Lycian issue no. 5, above; and on electrum of Cyzicus,[34] which of course had affinities all over the eastern Mediterranean. The star-like central pattern of our reverses, with its fine linear outlines and detail, can be compared to but does not closely resemble the many-pointed floral stars of Miletus.[35] A floral star is found also on Cnossian drachms, framed with straight and dotted lines as ours is, but without the concavity of the sides.[36] A frame of incurvate sides is found on some uncertain Carian fractions, although the frame is of parallel lines connected with cross-hatchings.[37] These Carian frames enclose a roughly-executed incuse with radiating lines forming a star-like design, but the coins are really not close to those published here. No closer parallels to our unusual coins can be cited. Be it noted, however, that all these comparisons are from southern Anatolia and Crete—and that only the mainland used the Persic standard.

The only indisputable letter on our drachm's reverse is a K (to left), and from its placement it appears to be the first letter of the inscription, almost certainly the ethnic. Below the K is the top of a vertical stroke, which can only be an I. The slanting upper tip of another probable marking is preserved at the bottom edge of the coin, but it is impossible to reconstruct the letter, if any, of which it was part.

One of the two possible expansions of KI in the area in question is KIΛIKION, an unusual regional ethnic but one which is found in both Greek and Aramaic on Cilician staters issued in Cilicia Pedias under the satrap Pharnabazus in 379–374 B.C.[38] Our coin bears no immediate resemblance to these in types or fabric, however.

[33] *BMCCrete* Itanus 4–7.

[34] H. von Fritze, *Die Electronprägung von Kyzikos*, Nomisma 7 (Berlin, 1912), p. 5, no. 52.

[35] *BMCIonia* Miletus; used as type or symbol on virtually all issues before Imperial times.

[36] J. N. Svoronos, *Numismatique de la Crète ancienne* (Mâcon, 1890), Cnossus 5.

[37] *BMCIonia* Phocaea 80–83; attributed to an uncertain mint in Caria, possibly Syangela, by G. E. Bean and J. M. Cook in *BSA* 52 (1957), p. 95.

[38] For example, *BMCLycaonia* Tarsus 13–27 (inscription in Aramaic); and Babelon, *Traité*, vol. 2, pt. 2, no. 588 and Macdonald, *Hunt. Coll.* 2, p. 546, no. 5 (KIΛIKION).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The only remaining clue to our coins' attribution may be furnished by their obverse type: the ketos. Canting types were common throughout early Greek coinage: along the south coast of Asia Minor may be cited the slinger (*σφενδονήτης*) of Aspendus, the pomegranate (*σίδη*) of Side, and the courser or race horse (*κέλης*) of Celenderis. If our ketos (*κῆτος*) is a canting type, it can only refer to the district of Cilicia Tracheia named Cetis or Cietis (*Κητίς* or *Κιητίς*). Cetis included the valley of the Calycadnus, the only fertile and level ground of any extent in Cilicia Tracheia, and, among others, the coastal cities of Anemurium, Nagidus, Aphrodisias, and Celenderis.[39] The district's name, sometimes Cetis, sometimes Cietis, appears on coins from the first century A.D. on,[40] and thus the second possible expansion of our coins' inscription is KIHTΩN or KIHTON although it seems impossible to see the slanting stroke at the coin's bottom as a portion of any of these last letters.

In several ways this rugged district of Cetis is a satisfactory attribution. Throughout antiquity it was the home of notorious pirates, and this may explain the stylistic affinities with Crete, and the Egyptian findspot of no. 6. Another explanation of the Egyptian findspot, of course, would be the campaigns of Pharnabazus against Egypt, which used Cilicia as their base, around 390 and again in the 370s B.C. Cetis is also tolerably close to what appears to be the only other mint to strike both Persic staters and drachms: Aspendus in Pamphylia.

As mentioned above, the drachms of Aspendus have recently been dated to ca. 410-375 B.C., and our coins surely look as though they were minted not later than this. One can only conjecture about their date, but two possible occasions before and during this period present themselves, although our knowledge of the area's history at the time is slight. Cilicia was throughout the fifth century under Persian dominion, although somewhat independent for a good deal of the time under one or another of her succession of kings, all named Syennesis. In 411–410 B.C., during the Peloponnesian War, the Persian satrap Tissaphernes assembled a Phoenician fleet which he brought to Aspendus, and it is to approximately this time that C. M. Kraay dates the earliest

[39] *RE* 11, s.v. "K(i)etis"; *BMCLycaonia*, pp. xl–xli and li–lii.
[40] Collected by Imhoof-Blumer, p. 458.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

issues of Tarsus.[41] Other Cilician coins of the very late fifth century seem to have been issued by two or more cities jointly,[42] and it is to this period that our coins probably belong. Another occasion, however, is the campaign of the satrap Tiribazus against King Euagoras of Salamis, ca. 386–380 B.C. Tiribazus, although not satrap of Cilicia, did coin in Cilicia Pedias[43] and may have called on Cilicia Tracheia as well for contributions. The Turks in their campaign of A.D. 1974 against Cyprus used the port of Mersin, ancient Zephyrium, as their chief base of operations in western Cilicia Pedias. One would expect that ancient navies, without engines, might have used the smaller but nearer ports of the district of Cetis as well, directly opposite Cyprus, and our coins may have been struck at one of these ports.

But on the whole, the late fifth century is perhaps more probable. Here belong the other possible joint Cilician coinages mentioned above; and nos. 6 and 7, with their simple types and compact flans, surely *look* this old.[44]

KINGS OF COMMAGENE: MITHRADATES I CALLINICUS

8. *Obv.*: Head of Mithradates r., wearing tall, pointed headdress, like the upright Persian tiara, with ties ending in a bow at back of head, and long ends falling down over back of neck; dotted border.

[41] C. M. Kraay, "The Celenderis Hoard," *NC*, 7th ser., vol. 2 (1962), pp. 14–15.

[42] See H. A. Troxell and W. F. Spengler, "A Hoard of Early Greek Coins from Afghanistan," *ANSMN* 15 (1969), pp. 6 and 8–11; and E. S. G. Robinson, "Greek Coins Acquired by the British Museum, 1938–1948," *NC*, 6th ser., vol. 8 (1948), pp. 56–57.

[43] *BMCLycaonia* Tarsus 12.

[44] Kraay, "Celenderis Hoard," pp. 7–8 divides the early coinages of the south Anatolian coast into three periods, of which the first two are present in his hoard buried ca. 400 B.C. A characteristic of his third period is circular reverse dies which, of course, our coins exhibit. This is not necessarily an indication that they fall after 400, however, for Cetis's only early minting city, Celenderis, used circular reverses throughout; and one of Tarsus's earliest issues (for example, *BMCLycaonia* Tarsus 11) has its type framed in a tilted square within incuse circle, very reminiscent of our coins' reverses.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: ΒΑΣΙΛΕΩΣ (to r.) ΜΙΘΡΑΔΑΤΟΥ [ΚΑΛΛΙΝΙΚΟΥ] (to l.). Athena standing l., with spear and shield.
Æ ↑ 8.47 g (PLATE 4, 8)
Bequest of Edward T. Newell, 1941.

9. *Obv.*: As 8.

Rev.: ΒΑΣΙΛΕΩΣ (above) ΜΙΘΡΑΔΑΤΟΥ (below, last three letters on line with symbol). Pegasus with curled wing l.; below, sword.
Æ ↑ 3.47 g (PLATE 4, 9)
Gift of Paul Bedoukian, 1969; noted in ANS *Annual Report* for 1969, p. 10.

10. *Obv.*: As 8, no dotted border.

Rev.: Protome of Pegasus with curled wing r.
Æ ↙ 1.79 g (PLATE 4, 10)
Bequest of Edward T. Newell, 1941.

Commagene, a mountainous area in northern Syria, broke away from Seleucid rule in the first half of the second century B.C. It enters written history only in the early first century B.C. with Mithradates I, son-in-law of Antiochus VIII Grypus. Mithradates' predecessor and perhaps father, Samos, is known only from inscriptions and a few coins;[45] a possible earlier king, Arsames (?), is known only from a single coin.[46] Both are portrayed wearing headdresses identical to Mithradates'.

The rare issue represented by no. 8 above is the only one of the three previously ascribed to Mithradates.[47] No. 9, previously unknown, does

[45] For coins with headdresses similar to ours, see Macdonald, *Hunt. Coll.* 3, p. 119, no. 1, pl. 70, 20 and F. Imhoof-Blumer, *Porträtköpfe auf antiken Münzen* (Leipzig, 1885), p. 42, pl. 6, 9.

[46] E. T. Newell, *Miscellanea Numismatica: Cyrene to India*, ANSNNM 82 (New York, 1938), no. 14.

[47] *BMCGalatia* Commagene 1–3, pl. 14, 7; Macdonald, *Hunt. Coll.* 3, p. 119, nos. 1–2, pl. 70, 22 = Imhoof-Blumer, *Porträtköpfe*, p. 42, pl. 6, 10. The form of the sigma in the inscription has previously been reported as as ⊏ or Ε; our nos. 8 and 9, however, clearly show Σ.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

not have the epithet, but has a similar obverse and must be associated with no. 8 as its half-denomination. The obverse, again, and the half-Pegasus of no. 10 associate this small coin with no. 9, even though no. 10 lacks inscription. No. 10 would thus seem the half-denomination of no. 9, and the quarter-denomination of no. 8.

The issue of no. 10 is known, but has been ascribed to the fourth-century Orontes, distant ancestor of the Commagenean dynasty under discussion.[48] Although Orontes was the instigator of the revolt of the satraps in 362 B.C., his other known coinages[49] show him wearing a satrapal headdress, never the upright tiara of the Great King. Orontes is also elsewhere shown bearded, while the portrait on our three coins is beardless. A Pegasus protome was a frequent reverse type of Orontes, and this no doubt lay behind Mithradates' choice of Pegasus for 9 and 10. The upright tiara does, however, point to a reigning king—Mithradates—rather than to the satrap.

Our three bronzes, all of similar thick fabric, are very likely early issues of Mithradates I Callinicus, possibly struck in the 90s B.C. Other bronzes ascribed to this ruler are of thinner fabric and may belong later in his reign.[50]

SELEUCID KINGS: ANTIOCHUS II

11. *Obv.*: Diademed head of Antiochus I r.

Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ Heracles seated l. on rock, holding club; in exergue, seal and ⋈; to r., faintly rendered just below title, the upper portion of ⊹.

AR Tetradrachm ↖ 17.09 g (PLATE 4, 11)

Bevelled edges are present on both obverse and reverse. Purchase, 1951.

The coin is a variant of *WSM* 1508, whose sole example is from the same obverse die, and whose reverse bears our three reverse markings

[48] E. Babelon, *Les Perses Achéménides* (Paris, 1893), p. 56, no. 379, pl. 9, 15.

[49] Babelon, *Perses*, pp. lxxii-lxxv and 56, nos. 376–78, pl. 9, 12–14.

[50] For example, E. Babelon, *Les Rois de Syrie, d'Arménie, et de Commagène* (Paris, 1890), pp. 217–18, nos. 4–5, pl. 30, 3–4.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

and an additional two monograms in the left field. Because of the seal, the canting type of Phocaea, Newell attributed *WSM* 1508 to this Ionian city, late in the reign of Antiochus II and our coin is to be assigned to the same time and place.

12. *Obv.*: Diademed head of Antiochus II r.

Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ Apollo seated l. on omphalos, holding bow and arrow; in exergue, seal.

Æ Tetradrachm ↖ 17.08 g (PLATE 4, 12)

Purchase, 1965.

The only coin known to Newell of *WSM* 1509, with the types of our coin, bears an uncertain youthful portrait head on obverse, and a possible seal in exergue as the only reverse marking. Newell decided that the poorly-rendered symbol was probably a seal, and therefore tentatively assigned the coin to Phocaea. The clear rendition of the animal on our coin confirms this attribution.

Newell was less sure of the identity of the obverse portrait on *WSM* 1509, considering it either Antiochus II or Hierax. The bevelling of the obverse edge on 1509 was the chief reason he considered a late date and thus an attribution to Hierax; with this edge now known on no. 11 above, struck under Antiochus II, it can no longer be taken as supporting an attribution to Hierax. Other considerations, however, did lead Newell to favor Antiochus II as the issuer of *WSM* 1509.

That despite his slender evidence Newell was correct about ruler as well as mint is shown by *WSM* 1633, yet another issue known from a single coin. Our coin is from the obverse die of 1633, which bears a certain portrait of Antiochus II. No reverse markings were preserved on 1633, and Newell thus listed it among his uncertain issues, but had no doubt as to the identity of the portrait.

A cast of 1633 at the ANS shows a decided elongated elevation at the bottom edge of the coin. It can now be recognized that this elevation is the remains of a seal symbol. Thus *WSM* 1633 and the coin here published both belong to the issue *WSM* 1509, whose attribution to Phocaea during the reign of Antiochus II is now confirmed.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

KINGS OF BACTRIA AND INDIA

DIODOTUS

13. *Obv.*: Eagle l., wings spread; dotted border.

Rev.: BAΣIΛ[EΩΣ] (to r.) ΔIOΔOT[OY] (to l.). Quiver.
Æ ↓ 1.05 g (PLATE 4, 13)
Purchase, 1974.

14. *Obv.*: BA[ΣIΛEΩΣ] (to r.) ΔIOΔOT[OY] (to l.). Eagle r., wings spread.

Rev.: Quiver; dotted border.
Æ ↖ 1.12 g (PLATE 4, 14)
Gift of Arthur Houghton, 1976.

These two coins of a hitherto unpublished issue present new types for Diodotus, although the eagle with spread wings is precisely the bird shown at the feet of Zeus on the reverses of gold and silver issues of Diodotus. The flan of no. 13 was cast in a sloping-sided mold, and retains a rather long projection, neatly terminated by a chisel cut, resulting from the casting channel. The flan on no. 14 is almost perfectly circular, with normal straight edges. Two different mints for the two coins would seem a distinct possibility.

AGATHOCLES

15. *Obv.*: Laureate head of Heracles r.; behind, cornucopiae or rhyton with cover, and club (?).

Rev.: BAΣIΛEΩΣ (to r.) AΓAΘOKΛEOY (to l.) Standing draped goddess facing, wearing polos (?); to r., ⌖.
Æ ↓ 7.55 g (PLATE 4, 15)
Gift of Arthur Houghton, 1976.

This handsome bronze of Agathocles seems again to be from a hitherto unknown issue. The identification of the obverse head is based on several considerations. Among male deities, the cornucopiae is associated

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

chiefly with two, Zeus and Heracles, although I am unaware of any representations showing the attribute behind the head. The infant Zeus had been nourished from the horn of plenty of the nymph Amaltheia. Heracles had kept as a drinking horn the horn he tore from the head of the river god Achelous; he is frequently shown in art carrying a large rhyton.[51] Our attribute does seem a covered rhyton rather than a cornucopiae, and thus suggests Heracles rather than Zeus. Although the head could be of either deity, the short hair is more characteristic of Heracles. The article of clothing draped over the shoulders is also probably the lion's skin.[52] Finally, the second attribute, only partially preserved below the horn or rhyton, does *seem* to be the knotty head of a club.

All indications thus favor Heracles over Zeus as the deity on the obverse. And, in context, this interpretation is the expected one, for similar Heracles heads, on bronzes of the same size, had been used by Agathocles' probable grandfather, Euthydemus I,[53] and father, Demetrius.[54] They were probably also used by his brother (?) Euthydemus II.[55] Interestingly, none of the Heracles-head bronzes of these other kings bears the monogram ✦. Mitchiner would assign Agathocles' other coins with this monogram to ca. 271–268 B.C. at the mint of Merv, in the constricted territory which Agathocles was able to maintain control of during Eucratides' invasion.[56] This may well be the approximate time and place of our coin's striking.

The identification of the coin's reverse figure is more difficult. The fully-draped figure certainly appears to be female. She holds something in her right hand: a faint line can be seen continuing from this hand

[51] For a numismatic depiction of Heracles with rhyton, see *BMCCyprus* Salamis 56–60.

[52] Compare the very similar Heracles-head issue of Agathocles' father, Demetrius, cited in n. 54.

[53] M. Mitchiner, *Indo-Greek and Indo-Scythian Coinage*, 1: *The Early Indo-Greeks and Their Antecedants* (London, 1975), no. 87 = *BMCBactria-India* Euthydemus I, 15–17.

[54] Mitchiner, no. 109 = *BMCBactria-India* Demetrius 13–14.

[55] Mitchiner, no. 97 (ascribed to Euthydemus I) = *BMCBactria-India* Euthydemus II, 6.

[56] Mitchiner, p. 68.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

over her shoulder, but the identity of the object is unclear. She seems to wear a narrow headdress, quite possibly a polos: if so, Demeter, Hera, Aphrodite, and Hecate, all of whom are found with this headdress, are possibilities. Both Agathocles and his other presumed brother Pantaleon use as a coin type Zeus holding a small figure of Hecate, but the figure is identified by its triple head, and two long torches; it is quite unlike our representation. Hera and Aphrodite are never found on Indo-Bactrian coins; Demeter is first found, in quite a different pose, only on the square bronzes of Philoxenus, over half a century later.[57]

The polos is perhaps most often worn by Demeter, however. One could suggest that a representation of Demeter might refer to Agathocles' father Demetrius—Agathocles' long series of "pedigree" coins show what importance he placed on the legitimacy of his claim to rule[58]—but if his subjects found the identification of our goddess as difficult as we do, it is hard to see what help she could have been to him.

[57] M. Mitchiner, *Indo-Greek and Indo-Scythian Coinage*, 3: *The Decline of the Indo-Greeks* (London, 1975), no. 344 = *BMC Bactria-India* Philoxenus 11–17 (the goddess described as "a City").

[58] Mitchiner, 1, pp. 142–46; see also *BMC Bactria-India* Agathocles 1–3 and p. xxviii; J. Allan, "Indian Coins Acquired by the British Museum," *NC*, 5th ser., vol. 14 (1934), pp. 229-31, pl. 3, 1.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

A GREEK IMPERIAL MEDALLION FROM PAUTALIA

(PLATE 5)

MARGARET THOMPSON

In 1975 the American Numismatic Society acquired a spectacular bronze medallion of the Greek Imperial series:

Obv.: AVT KAI T AI AΔPI ANTΩNINOC Draped bust of Antoninus Pius r., head bare. Border of dots.

Rev.: HΓEM ΠOMΠEI OVOΠ[EICKOV] around; ΠAV TAΛIΩTΩN in exergue. Heracles advancing l., holding lion's skin and club in l. hand and long torch in r.; to l., tall column surmounted by statue; to l. and r. in lower field, two small Erotes. Border of dots.

↓ 66.50 g 40 mm (PLATE 5, 1)

Not only is the piece unpublished but it is a remarkable example of medallic art. Both the bust of Antoninus and the figure of Heracles are superbly modelled in high relief. Subsidiary details, such as the adjuncts of the hero and the frolicking Erotes, are rendered with great care and the whole composition conveys a spirit of vigorous action which is most impressive. Clearly this is the work of a master engraver.

That it was produced in the provincial town of Pautalia is surprising to say the least. The mint there was a foundation of Roman times, opening under Antoninus[1] and closing under Caracalla. During the relatively brief period of its existence, output was extensive but in no way noteworthy for artistic achievement or imaginative typology. Yet it was Pautalia that struck what is perhaps the finest of known Greek Imperial medallions.

[1] See L. Ruzicka, *Die Münzen von Pautalia* (Sofia, 1933), p. 6 for a discussion of issues erroneously attributed to an earlier period.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The term "medallion" is sometimes applied indiscriminately to any Greek Imperial bronze of unusually large size and heavy weight.[2] As Jocelyn Toynbee points out, in an article on "Greek Imperial Medallions,"[3] this is generally a misnomer. Despite the abnormal dimensions of these bronzes, "their frequency and their normally mean technique, low relief, and countermarks reveal them to be, not presentation pieces, but current money issued for circulation." There are indeed only two bronze series which Toynbee would consider true medallions: certain Antinous pieces, struck at various mints between A.D. 134 and 138, and issues of Elis, again from the time of Hadrian, showing on the reverses a number of local types including the head or statue of the Pheidian Zeus. To these she would add a single specimen in Berlin with the bust of Faustina II and an elaborate Dionysiac scene on the reverse.[4] No one of the pieces cited is superior in style and technique to our new Pautalian issue.

The sharp contrast between the excellent workmanship of the Hadrianic medallions and the mediocre quality of other issues from the same mints led Toynbee to postulate that the former were made by imperial medallists commissioned by the local authorities to execute these special pieces, which served to commemorate notable occasions or events. In the case of the Antinous issues a connection with the quadrennial festival established by Hadrian would seem likely, and the Elean medallions may, as Toynbee says, have been inspired by the emperor's presence in the Peloponnese before and after the Jewish war.

The Pautalian medallion, like those discussed by Toynbee, was almost certainly the work not of a provincial artisan but of a skilled Roman

[2] The practice is largely restricted to earlier numismatists, following T. E. Mionnet, but Ruzicka, writing in 1933, designates two coins of Pautalia as medallions: nos. 50 (27.20 g; 32 mm) and 180 (24.10 g; 33 mm). Their diameters and weights are unusual only in relation to other emissions of Pautalia.

[3] J. Toynbee, "Greek Imperial Medallions," *JRS* 1944, pp. 65-73.

[4] Toynbee, pl. 3, 4. The obverse carries a Greek legend; the reverse is uninscribed so one cannot determine the mint. Despite the Greek inscription, H. Dressel includes the same piece among his Roman medallions (*Die Römischen Medaillone* [Zurich, 1972], no. 51), citing its Roman style and fabric, but see below, n. 5.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

engraver.[5] One can even suggest an approximate date for his activity. The legend with T AI AΔPI is not the usual form for the coins and medallions of Antoninus. It appears during the early years of his reign, A.D. 138–40, and then is briefly revived in A.D. 150–52. It would seem that our Pautalian piece, with its Hadrianic inscription, belongs to one of these two periods. The mature but not elderly portrait makes the earlier date the more probable and this is confirmed by stylistic comparisons with Roman coins and medallions which can be dated with a fair degree of precision. Four medallions in Gnecchi[6] and a sestertius in the British Museum[7] have portraits so similar to that of our medallion as to point to the same hand. All were struck A.D. 140–44 with the exception of one medallion which is assigned to A.D. 145 or later. The Roman issues, however, carry the ANTONINVS AVG PIVS form of the legend so if we are indeed dealing with a single artist, his commission from Pautalia may have come just before his period of greatest activity at Rome.

There is one question which arises if our medallion belongs to the early years of Antoninus's reign. On his regular coinage at Pautalia the names of two governors are found: Pompeius Vopiscus and Gargilius Antiquus.[8] Since the second man is also connected with the issues of Marcus Aurelius, Vopiscus is the earlier of the two, but neither term of office can be dated closely. Ruzicka,[9] arguing chiefly from the elderly portrait of Antoninus on the coins of Gargilius and the fact that the latter's governorship continued under Marcus, would place Vopiscus before A.D. 160 with Gargilius succeeding him at about that time.

[5] The existence of this piece, clearly labelled as the product of a Greek Imperial mint, supports Toynbee's classification of the uninscribed Berlin medallion. The Greek legends and Roman style of both are explained by Roman artists working for Greek cities.

[6] F. Gnecchi, *I Medaglioni Romani* (Milan, 1912), pl. 43, 6–8 and pl. 50, 8. The first two are illustrated with greater clarity in Dressel, pls. 2, 6 and 3, 5.

[7] *BMCRE* 4 Antoninus Pius 1235 (not illustrated but an ANS coin provides the comparison).

[8] The same names appear on the coinage of a number of other Thracian cities, including Bizya, Hadrianopolis, Philippopolis and Plotinopolis.

[9] Ruzicka, p. 8.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Hüttl[10] on the other hand puts Vopiscus in Thrace between 145 and 155, but there is apparently no concrete evidence for the exact duration of his authority. It may be, as the medallion of Pautalia suggests, that he assumed office at a somewhat earlier date.

Discussion of the reverse type involves another issue of remarkable similarity. This is a Greek Imperial coinage from the Phrygian mint of Temenothyrae:

Obv.: IEPA CVNKΛHTOC Draped bust of the Senate l. Border of dots.

Rev.: APOVN NEIKOMAXOC APXIEPEVC APX A TO B THMENOΘVPEVCI Heracles advancing l., holding lion's skin and club in l. hand and long torch in r.; to l., tall column surmounted by statue; to l. in lower field, a small Eros. Border of dots.

At least four examples are known: from London, Paris, Glasgow, and the former Pozzi Collection.[11] All are from the same reverse die and the first three share an obverse. The Pozzi coin was thought by Dieudonné to be from a different obverse die, but one would need to see the piece itself or a clear reproduction[12] to be sure that it is not a matter of recutting. Recorded weights, although heavier than those of other coins of similar diameter from Temenothyrae, are within the normal range for Greek Imperial issues of large module.[13]

Despite the fact that this coinage carries no imperial portrait, its date is firmly fixed by the occurrence of the name of the same archon

[10] W. Hüttl, *Antoninus Pius*, 2 (Prague, 1933), pp. 165–66 and cited in *RE* 21, s.v. "Pompeius no. 120."

[11] *BMCPhrygia* Temenothyrae 12 (PLATE 5, 2); A. Dieudonné, Review in *RN*, 4th ser., vol. 11 (1907), pp. 127–29. (PLATE 5, 3); Macdonald, *Hunterian Coll.* 2, p. 494, no. 1 (PLATE 5, 4); *Bull. soc. natl. des antiquaires de France* (1906), pp. 385–88.

A second specimen at Glasgow (Macdonald, *Hunterian Coll.* 2, p. 494, no. 2) is a cast of the Paris piece, as reported by A. S. Robertson. The coin described by T. E. Mionnet (*Description de médailles antiques*, 4 [Paris, 1809], p. 147, no. 837) may be a fifth example or one of those listed above.

[12] The coin was not in the Naville sale of 1921 and its present whereabouts are unknown.

[13] Paris 40.35 g; Glasgow 38.93 g; the BM specimen is pierced.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

on emissions at Temenothyrae with the portraits and titulature of Otacilia and Philip Junior.[14]

There can be no comparison between this striking and that of Pautalia with respect to style and execution. The Phrygian coin is a fairly typical example of provincial workmanship during the period of Roman domination: flat relief, careless modelling and lettering, and a generally spiritless quality. What is amazing, however, is the identity of the two reverses; except for the omission of the Eros in the right field, the coin of Temenothyrae faithfully reproduces the Heracles scene of the Thracian medallion. Yet the two issues are separated by nearly a century and by about 500 miles as the crow flies. It is difficult to believe that a die cutter working in Phrygia in the middle of the third century happened upon a medallion of much earlier date from a remote Thracian town and decided to copy its reverse. A common prototype is far more probable.

The prototype, assuming its existence, has vanished without further record. All that remains is the numismatic evidence and that is enigmatic.[15] Mionnet, publishing the issue of Temenothyrae, describes the representation as Heracles with a long torch burning the heads of the Hydra, and Macdonald in the second Hunterian volume makes the same association with the second labor. This misinterpretation, largely deriving from the rather sketchy outlines of the Eros figure, is corrected by Head in the British Museum Catalogue: "a small winged Eros l. pulls a taut rope apparently attached to the right leg of Herakles." In reproducing and discussing the Pozzi piece, Dieudonné points out

[14] *BMCPhrygia* Temenothyrae 29–32.

[15] Many colleagues, numismatists and non-numismatists alike, have been consulted in my search for a prototype and an interpretation of the scene. No one has provided an answer but I am indeed grateful for their efforts and suggestions.

One interesting theory was advanced by Dr. James H. Schwartz, whose medical background may have prompted him to identify the central figure of our medallion with Heracles the Healer as portrayed in the Orphic Hymn (12). His torch would symbolize fumigation or sterilization and the winged creatures would be not benign Erotes but noisome Keres. Intriguing as the suggestion is, it is hard to associate the playful figures of the medallion with the emaciated and at times baleful Keres of ceramic art (see in particular the illustration of Heracles and Ker on a pelike from the Berlin Museum in J. E. Harrison, *Prolegomena to the Study of Greek Religion* [Cambridge, Eng., 1903], p. 166).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

that the clarity of its reverse leaves no doubt but that Head is right in his identification and that the scene may be explained as follows: "Éros a profité du sommeil d'Héraclès pour l'enchainer; Héraclès se réveille, il saisit la torche que le jeune dieu a dû poser, et, moitié par colère, moitié par badinage, il le poursuit en cherchant à lui brûler les ailes."[16] Dieudonné then goes on to remark that the explanation seems a little forced and that he knows of no similar representation.

One premise of the interpretation is somewhat dubious, namely that Eros has Heracles by the leg. All four reverses show traces of a line extending from the thigh of Heracles toward the figure of Eros but there are differences. On the British Museum piece the "rope" seems to stop with the column; on the Paris coin it impinges on the column; on the Pozzi specimen it runs with clear definition straight across from leg to Eros. That the "rope" is merely a die break[17] becomes all the more probable in that the Pautalian medallion shows no bond between Heracles and Eros.

Whether or not Heracles is bound is of relatively minor importance. Nor does the presence or absence of the second Eros affect the basic symbolism of the representation. Along the lines of Dieudonné's original explanation, what we seem to have on the medallion of Pautalia is a befuddled, tipsy Heracles setting out in torchlight pursuit of two small tormentors, one of whom creeps up behind to prod or pull the hero's leg, perhaps in an attempt to topple him, while the other flees before him. A deity surveys the scene from on high.[18] Clearly there is no connection with any of the labors or myths of the Heracles cycle, so frequently adapted as coin types. The reference must rather be to

[16] *Bull. soc. natl. des antiquaires de France*, p. 387.

[17] Anne Robertson, who has kindly examined the coins at Glasgow, writes: "The two lines are not exactly the same on the two Hunter specimens and could indicate progressive die wear."

It is interesting to note that A. Dieudonné subsequently had doubts about the "rope." Reviewing Head's catalogue in the *RN* of 1907 (p. 128), he suggests that the running Eros is also carrying a torch.

[18] The figure is almost certainly female but the small scale obscures any adjuncts except for a spear or scepter. Mionnet and Dieudonné identify the deity as Pallas; Head more cautiously describes it as "a statue resting on a sceptre." The choice is most likely between Athena and Aphrodite.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the concept, recurrent in both the major and minor arts, of Love conquering or combatting Strength,[19] but whereas the usual representation is of Erotes making off with or in triumphant possession of Heracles' weapons, the numismatic type implies that the action is just beginning or that the hero has frustrated, for a time at least, the assault of his would-be despoilers. As Dieudonné says, there is no parallel for this particular rendering.

Toynbee notes that the subjects chosen for imperial medallions derive in large measure not from coins but from major works of art, among them bas-reliefs and paintings now lost to us.[20] To the examples she cites, we may add this new medallion with its marked pictorial quality. One might go even further into the realm of pure speculation and suggest that its prototype was a painting of the Pergamene school, a painting which has left no other record but which was famous enough in antiquity to have inspired two die engravers working at different times in quite different parts of the Greco-Roman world.

The choice of a Heraclean reverse type for a medallion of Antoninus is logical enough. Again quoting Toynbee, Heracles' role as friend and benefactor of man brought him into close relationship with the emperor and as a result he was a popular subject for medallic art, notably under the Antonines. The problem then is not why Pautalia selected a Heraclean type for her distinctive medallion honoring Antoninus, but why she issued it at all. In the case of other Greek Imperial medallions the connection between special emission and special occasion is readily established—the celebration of an imperial festival or an imperial visit. There was, however, no direct personal contact on the part of this emperor with Pautalia or any Thracian community. Unlike his predecessors, Antoninus was not a peripatetic ruler; he apparently was content to stay in Rome and control the state from there. This is not to say that he was unconcerned with affairs in outlying areas. It was under Antoninus that a provincial assembly for Thrace came into

[19] C. Daremberg and E. Saglio, *Dictionnaire des antiquités*, s.v. "Cupido," p. 1606; G. M. A. Richter, *Catalogue of Engraved Gems* (New York, 1956), nos. 230, 414, 613; *The Greek Anthology*, trans. W. R. Paton, Loeb Classical Library, 5 (London, 1953), bk. 16, pp. 214–15.

[20] J. Toynbee, *Roman Medallions*, *NS* 5 (New York, 1944), pp. 20 and 220–27.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

existence, with centrally-located Philippopolis as its seat.[21] A new governor arrived, who may have been instrumental in strengthening the economy of the region, for it was under Antoninus that minting activity began or was accelerated in various inland communities other than Pautalia: Hadrianopolis, Philippopolis, Plotinopolis and Topirus. Whatever the tangible benefits of these political and economic measures, they must at the very least have convinced the Thracians of the emperor's interest in their well-being. When her new mint opened, Pautalia may have felt it fitting that the initial issue be a medallion in honor of Antoninus, commemorative perhaps of no single event but rather of provincial gratitude for imperial beneficence.

[21] J. Keil, "The Greek Provinces," *The Imperial Peace, A.D. 70–192*, CAH 11 (New York, 1936), p. 572.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ANOTHER LOOK AT THE COINS OF HATRA

(PLATES 6–7)

JOHN J. SLOCUM

In the general category of Greek Imperial coins, without a doubt the most peripheral and esoteric are those of Hatra, a small desert state which achieved some measure of independence from Parthia or from Adiabene, itself a Parthian tributary, in the first quarter of the second century of our era and lost it to the Sasanian king, Shapur I, in the second quarter of the third century.[1] During this brief period Hatra evolved from a caravan stop on the desert route between Antioch and the Persian Gulf to a military outpost able to withstand siege by Trajan in A.D. 117, to a great religious center primarily devoted to the worship of the sun god Shamash, whose temple precinct or enclosure gave the city its name.[2] In Aramaic the word for enclosure is ḤṬR'.[3]

The city itself is located approximately 50 miles southwest of Mosul in northern Iraq and about 31 miles west-northwest of ancient Assur on the Tigris. A double wall nearly four miles in circumference surrounds an area of about 800 acres.[4] Toward the center of the city a stone wall protects a vast rectangular enclosure of some 37 acres within which stands the great temple of the solar deity Shamash, still an imposing

[1] J. Teixidor, "The Kingdom of Adiabene and Hatra," *Berytus*, 17 (1967–68), pp. 1–11. This article owes a great deal to the kindness of Margaret Thompson and to Harald Ingholt who has helped with references and the checking of Aramaic texts.

[2] For the three phases of Hatra's existence, see A. Stein, "The Ancient Trade Route Past Hatra and its Roman Posts," *JRAS* 4 (1941), pp. 299-316; F. A. Lepper, *Trajan's Parthian Wars* (Oxford, 1948), pp. 89–91, 116–18; D. Schlumberger, *L'Orient Hellénisé* (Paris, 1970), pp. 123–24.

[3] A. Caquot, "Nouvelles inscriptions araméenes de Hatra," *Syria*, 29 (1952), p. 114.

[4] The location and dimensions of Hatra were provided by Harald Ingholt. Hachette's *Guide to the Middle East* (Paris, 1966), p. 722, gives the distance to Hatra from Mosul by road and track as 83 miles and the distance from Assur to Hatra as 51 miles.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

sight 1,800 years after its construction. Excavations, begun by the Iraq Department of Antiquities in 1951 and carried out almost continuously since,[5] have yielded a fascinating collection of sculptural representations of gods, kings, priests and nobles, a wealth of inscriptions, and many small objects including coins. These discoveries have confirmed the importance of Shamash and the religious orientation of the city, supporting Schlumberger's contention that Hatra's chief role and source of revenue in its heyday was as a pilgrimage place.

John Walker was the first numismatist to catalogue correctly and discuss at some length the major coinage of Hatra: rather crude bronzes with the name and image of Shamash.[6] At the time of writing he was able to record over 20 examples with absolute certainty[7] and of these, 10 are illustrated in his *NC* article. Since Walker's publication, additional specimens of his Type A have come to light[8] as well as other coins which are clearly products of the Hatra mint. Another look at the coinage as a whole would seem to be in order.

SERIES 1 (Walker's Type A)[9]

Obv.: Draped bust of beardless sun god to r.. with flowing locks and sun rays. On some examples there are ties behind the

[5] Beginning with *Sumer*, 7 (1951) and ending with vol. 30 (1974) scarcely a year passed without an excavation report on Hatra by Fuad Safar, Wathiq al-Ṣāliḥī, and others.

[6] J. Walker, "The Coins of Hatra," *NC*, 6th ser., vol. 18 (1958), pp. 167–72. In his article Walker summarized earlier attributions and the evidence for his reassignment.

[7] A number of other pieces, chiefly from the Hatra excavations, undoubtedly belong to the same series but they are not illustrated in the field reports. Of special importance is a hoard of 47 coins, most of them with radiate head and eagle types, found in one of the buildings of Area 2 (F. Safar, "Hatra and the First Season of Excavations," *Sumer*, 8 [1952], pp. 11–12 and H. Ingholt, "Parthian Sculptures from Hatra," *Memoirs of the Connecticut Academy of Arts and Sciences*, 12 [July 1954], p. 8.)

[8] Among them, excavation coins not included in the listing but illustrated in the pages of W. al-Ṣāliḥī, "Hatra Excavations in Group of Tombs 1970–1971," *Sumer*, 28 (1972), pp. 17–20 (in English) and pp. 19–30 (in Arabic); 30 (1974), pp. 155–62 (in Arabic).

[9] Unless otherwise indicated all coins of Series 1–3 are in the author's collections. Illustrated examples are asterisked.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

neck. In the field, upward to r., the Aramaic legend HṬR'DŠMŠ. All in a circle of dots.

Rev.: Within laurel wreath, an eagle with outstretched wings and head reverted above the letters ↄS (SC of the prototype upside down). Usually a globule or pellet between the letters. All in a circle of dots.

*1. ↑14.19 g.

2. Same obverse die as no. 1. ↑14.39 g.

*3. ↑13.80 g.

4. ↑13.30 g.

*5. ↑13.27 g.

*6. Struck over a coin of Laodiceia under Trajan; ΛΑΟΔΙΚЄ and the profile and part of the mural crown of the Tyche reverse are clearly visible.[10] ↑10 g; ANS.

*7. Same obverse die as the Paris specimen illustrated by Dieudonné.[11] ↑10.51 g; ANS.

8. ↖10.50 g.

*9. Struck over a coin of Laodiceia under Antoninus Pius; the letters O Θ E in front of the Tyche bust and traces of the legend can be made out in the lower r. field of the Hatra reverse as it is reproduced here.[12] ↖9.68 g.

10. ↑9.17 g.

11. Overstruck but the undertype cannot be identified. ↓7.99 g.

*12. ↖7.39 g.

*13. 12.00 g; H. Bartlett Wells.

[10] The undertype is very probably from the same reverse die as PLATE 6, A, an issue of A.D. 115 in the ANS cabinet, 10.99 g. I am indebted to Nancy Waggoner for this identification.

[11] A. Dieudonné, "Numismatique syrienne," *RN*, 4th ser., vol. 10 (1906), pl. 6, 1.

[12] The original issue is that of *BMC Galatia* Laodicea 74, probably to be dated A.D. 143.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

14. ↖6.43 g (broken); BM.[13]

*15. ↑10.32 g; BM.

*16. ƧC or CS Overstruck, possibly on a coin of Ptolemais at the time of Septimius Severus.[14] ↖8.73 g; BM.

*17. ↑6.00 g.

As is evident from the reproductions here and elsewhere, there is considerable stylistic diversity, especially in the renderings of Shamash, in this first Hatraean series. Furthermore, there is little die duplication. Walker records two instances of an identical obverse die; the present catalogue includes two more. There seems to be no reverse linkage.[15] This suggests a fairly substantial coinage of some duration.

Great diversity is also apparent in the weights, ranging from 14.39 to 6.00 grams. One might speculate that this indicates several series, struck to different standards, with possible chronological implications, but the explanation in all likelihood is far simpler. It is noteworthy that four coins of the present catalogue are definitely overstruck and others show possible traces of an undertype. Two of the flans are issues of Laodiceia, and during the first centuries of our era the coins of that mint show wide variation in size and weight, comparable with that of the Hatra pieces.[16] If, as seems probable, the currency of Hatra was largely produced by overstriking coins of other mints, the weights would reflect those of the original issues.

SERIES 2

Obv.: Radiate and beardless head to r.; ties behind the neck on some examples. Circle of dots.

[13] Nos. 14–16, from the British Museum, were not included in Walker's publication.

[14] See also Kadman, *CNP* 4, p. 116, no. 123. Both obverse and reverse are obscure. Martin Price writes that it is difficult to tell whether the upper head is over the lower or vice versa. On the reverse there may be traces of a profile head and letters [P]TOL (?).

[15] Admittedly it is difficult to compare dies when the coins are poorly-preserved bronzes, often available only from illustrations.

[16] See also *SNGCop Cyprus* Syria Cities 339–59.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: Eagle with outstretched wings standing to r. on a palm branch. Circle of dots.

*18. ↖3.46 g; ANS.

*19. ↖3.18 g; L. Cancio.

*20. ↑3.36 g; L. Cancio.

*21. Probably overstruck; traces of laurel wreath visible on obverse. ↑3.38 g; L. Cancio.

*22. ↑2.51 g. Possibly a different denomination or a later striking.

These coins are more elusive than those of Series 1. One was described and illustrated by Walter Andrae in his account of the early excavations at Hatra,[17] and subsequent reports add 12 or 13 examples from the site.[18] Of the 5 pieces above, those in the Cancio collection are said to have come from a hoard found in northern Mesopotamia.

Although uninscribed, these small bronzes clearly belong to Hatra on the evidence of types, style and findspots. How they relate to the larger coins of Series 1 is uncertain. In his article in *Sumer* 1974, al-Ṣāliḥī suggests that they were intended as half-units of the larger denomination and some fractional relationship is very likely. The weights are more consistent than those of the larger Shamash coins but the sampling is too small to be significant. It might be noted, however, that there is a close correspondence in size and weight with some of the Antiochene strikings of the second century.[19]

SERIES 3

Obv.: Radiate bust of very crude style to r.; prominent ties behind the neck.

[17] W. Andrae, *Hatra* 2, Wissenschaftliche Veröffentlichung Der Deutschen Orient-Geselschaft, 21 (Leipzig, 1912), p. 6.

[18] al-Ṣāliḥī, vol. 28, fig. 23, no. 3; vol. 30, pl. 3. One of the 12 examples on the plate (the coin to the extreme right, top row) shows a head l. and a bird quite unlike the eagle with outstretched wings of the Hatraean series. It is very probably a Parthian issue but the illustration is too poor to judge with certainty.

[19] See especially issues under Antoninus Pius, *SNGCop Cyprus* Syria Cities 220–23.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: Within a sketchy laurel wreath, the letters ↄS.

*23. Bust to l. within circle of dots. ↓6.68 g; ANS.

*24. ↓8.35 g.

*25. ↓6.80 g (small piece missing).

*26. ↓6.35 g.

27. ↓6.96 g.

28 ↓6.21 g.

All coins of Series 3 are ancient casts of debased alloy.[20] Their execution is rough in the extreme; the bust of Shamash little better than a caricature. With the exception of no. 23, which is a comparatively good specimen, there is no attempt at defining the features and the sun rays, when visible at all, appear as two spikes above the head. Care has been taken, however, to emphasize the diadem ends behind the neck, which are shown as thick ribbons. On the reverses the wreath has degenerated into irregularly-placed strokes and blobs.[21]

Two examples of this coinage were found in the excavations of 1971–72,[22] the first appearance of the type at Hatra. Of the pieces above, four were secured from Levantine dealers.

It remains necessary to explore the chronology of the coinage and the reasons for its emission. In the absence of precise archaeological and epigraphical evidence, any conclusions must, to some extent, be speculative.

[20] This is evident from their appearance and confirmed by specific gravity readings. Dexter Seymour has kindly run tests on ten pieces with the following results: Laodiceia (PLATE 6, A), 8.913; Hatra/Laodiceia (no. 6), 8.855; Hatra (no. 7), 8.877; Hatra (no. 12), 8.797; Hatra (no. 18), 8.708; Hatra (no. 19), 8.541; Hatra (no. 23), 8.528; Hatra (no. 26), 8.541 (no. 28), 7.763; "Singara" (PLATE 7, B), 8.909.

While the coins of Series 1 are of good alloy, comparable to that of the issues of Laodiceia, those of Series 3 are of inferior composition. The two specimens of Series 2 have anomalous readings.

[21] The careless rendering of the wreath, which has no visible ties, makes it impossible to tell whether the letters are upright or upside down. Either the die alignment is exactly the opposite that of Series 1–2 or the engravers of the cast pieces have reproduced the Roman SC with greater accuracy.

[22] al-Ṣāliḥī, vol. 30, pl. 2, 20–21.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The reverse type of the large Shamash coins is undoubtedly an inept imitation of the familiar issues of Antioch, their ↄS a mirror image of the SC of the Greek Imperial pieces. Dieudonné[23] believed that the prototype was the coinage of Antoninus Pius upon which, according to the French numismatist, the eagle and the letters SC appeared for the first time. Milik[24] argues that the coins were struck by King Sanatruk on the occasion of Lucius Verus's visit to the East, while Martin Price would place some even later, at the time of Elagabalus.[25]

It should be noted, however, that on the Anthiochene coinage under Antoninus Pius, the eagle of the reverse is below and not above the letters. The reverse of the large coins of Shamash were more likely a synthesis of the eagle so prominent on the reverse of the tetradrachms of Antioch with the SC on the reverse of the Senatorial bronzes.

A connection with Trajan's coinage is attested by the overstrike at the American Numismatic Society, a Shamash bronze of Series 1 on a Laodiceian issue of A.D. 115. Noteworthy, too, is Walker's valid comparison of the bust on his first specimen with that of Trajan himself.[26] The coins of that emperor may well have served as more than flans for the Shamash strikings of Hatra.

The history of Hatra is ill defined. Its architecture is described by Andrae[27] as "late Parthian," and Schlumberger[28] argues that there was nothing on the site before Parthian occupation. We do know that the town withstood Trajan's siege in A.D. 117; by that time it was presumably a well-fortified settlement important enough to be besieged.[29] Of its fortunes under Trajan's successor we know nothing but it is perhaps relevant to recall that Hadrian reversed Trajan's policies in the

[23] Dieudonné, p. 134.

[24] J. T. Milik, *Recherches d'épigraphia proche-orientale, 1: Dédicaces faites par des dieux* (Paris, 1972), p. 362.

[25] This opinion was communicated to the author by Martin Price, who kindly supplied casts of the three British Museum coins of Series 1, nos. 14–16.

[26] Walker, p. 171.

[27] Andrae, p. 5.

[28] Schlumberger, p. 121.

[29] Although Dio Cass. (68.30.6) describes the besieged city as "neither large nor prosperous," this is hard to reconcile with the fact that it was able to hold out against the Roman armies.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

East and established the Euphrates as the Roman border.[30] Although there is no record of any specific measures that Hadrian took to maintain peace in the area, one obvious move would have been the subsidizing of cities such as Hatra, which served as buffers against Parthia between the Tigris and the Euphrates. An arrangement with Rome[31] and the increased prosperity resulting from it would explain a coinage modelled on Roman prototypes beginning in the reign of Hadrian.

If the Shamash bronzes of Series 1–2 were first struck ca. A.D. 117–38, what of the crude cast pieces of Series 3? They are clearly of much later date, and one wonders why a city would continue to issue coins when its poverty and mint disorganization were such that it could produce only these caricatures. A possible answer is that they were struck a major disaster because they fulfilled a function associated with the very survival of the city. The obvious catastrophe is the conquest of Hatra ca. A.D. 241 by the Sasanian king, Shapur I. It has often been asserted that the city was then totally destroyed and its inhabitants killed or enslaved,[32] but more recent historians have expressed skepticism about the abrupt end of Hatra.[33] Its final demise would seem to have been a more gradual process as its gods yielded to the Mazdaism of the Sasanians and the coming of Christianity to that part of the world. In the intervening years the cast coins of Hatra may have continued to fill a need in the life of the city.

What that need was is perhaps indicated in an article by Susan Downey[34] on *thesauroi*, cult banks or offering boxes. These were cylindrical objects with domed or pointed stone lids slotted to receive coins, the lids carved with representations of gods or symbols. Their purpose was presumably to receive offerings to the gods or payments for parti-

[30] Lepper, p. 14.

[31] Milik, p. 364, argues that Hatra was an ally of Rome at a somewhat later date, in the 70s of the second century. In A.D. 235 there were Roman troops in Hatra (D. Oates, "A Note on Three Latin Inscriptions from Hatra," *Sumer*, 11 [1955], pp. 39–43) and the city supported Rome against the first Sasanian king, Adashir.

[32] Amm. Marc. 25.8.5.

[33] Notably Teixidor, p. 11 and Milik, p. 355.

[34] S. Downey, "Cult Banks from Hatra," *Berytus*, 16 (1966), pp. 97–110.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

cipation in sacred banquets.[35] The presence of these "banks" at Hatra in conjunction with the dominantly religious character of the Hatraean coins suggests that the latter were issued primarily for the use of pilgrims to the holy city who were required to convert their own money into the local currency. Such conversion would certainly involve the payment of a premium and this, one assumes, would represent considerable financial gain at very low cost since the local coins could be recirculated and the supply easily augmented by overstriking foreign coins secured by exchange. The Shamash issues, then, would be basically a temple coinage, serving a specific purpose during the period of Hatra's greatest prosperity and would continue to be struck for a time at least after the disaster of the Sasanian conquest.

In addition to the coins discussed above, undoubtedly produced at Hatra, there are three issues which have been definitely or tentatively attributed to that mint. The first is Walker's Type B:[36]

Obv.: Draped bust of beardless moon god to r., wearing a diadem with crescent above the forehead. Downward on r., an Aramaic legend SIN MRLHA. All in circle of dots.

Rev.: Within a laurel wreath, a crescent above the letters ƆS. All in circle of dots.

Although there is no mention of Hatra in the inscription which identifies the deity on the obverse as Sin, the Lord of the Gods,[37] the striking

[35] Schlumberger, pp. 130–31, discusses sacred banquets at Hatra similar to those at Palmyra. Almost half of Milik's *Dédicaces* is devoted to the sacred banquets and their participants at Palmyra, Hatra and elsewhere. Organization of celebrants in such a banquet, translated by Milik in French as "thiase," is found in J. Teixidor, "Aramaic Inscriptions of Hatra," *Sumer*, 20 (1964), pp. 77–82.

[36] Walker knew two examples from a private German collection. Another specimen, in the author's collection, is illustrated here (PLATE 7, B; 7.26 g). Peter Berghaus writes that the original owner of the two examples mentioned above died in 1962 and that these coins have since disappeared. The specimen illustrated is therefore the only one known at the present ime.

[37] Sin, Lord of the Gods, is known from Harran (C. J. Gadd, "The Harran Inscriptions of Nabonidus," *Anatolian Studies*, 8 [1958], pp. 35–92). At Sumatar Harabesi, near Harran, there is a monument with a dedication to Marilaha, whom J. B. Segal ("Pagan Syriac Monuments in the Vilayet of Urfa," *Anatolian Studies* 3 [1953],

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

resemblance between these coins and those of Shamash led Walker to assign them to the same mint. Walker's attribution of the SIN coins to Hatra was generally accepted and cited in subsequent discussions of the cults of Hatra.[38] Doubts were voiced, however, most recently by Milik[39] who wrote: "It is truly astonishing that there is no trace of the cult of Sin in the Hatraean epigraphy which is actually relatively rich." While admitting that a sanctuary to Sin might exist in the unexcavated sections of the city, Milik stressed the number of sanctuaries that had been found in various areas and concluded, "The 'Type B' [that is, Walker's Sin issues] of the coinage of Hatra belongs rather to another city, perhaps Singara."

Two other bronze types have been recorded as possible issues of Hatra. In publishing a large hoard from Nisibis,[40] Henri Seyrig suggested that the following might have a Hatraean origin:

Obv.: Beardless head r., diademed and radiate.

Rev.: Male figure with short scepter or baton in raised r. hand, mounted on camel to r.

Obv.: Head as above.

Rev.: Camel l.

---

pp. 101–2, 114–16) does not identify as the moon god but does say that a bust of Sin was found nearby. An inscription from Sa'adiya, some 15 to 20 miles east of Hatra, refers to Marilaha (A. Caquot, "Nouvelles inscriptions araméennes de Hatra," *Syria*, 40 [1963], pp. 1–16).

Since this paper was written, Javier Teixidor very kindly called my attention to a study by A. B. Aggoula, "Remarques pour les inscriptions Hatréennes," which appeared in *Mélanges Université St. Joseph* (Beirut, 1972). Aggoula suggests that the coins with the legend SIN MARILAHA were struck in Hatra for one of the territories under its control when it was the capital of the kingdom of the Arabs—either for Sumatar or Harran. He dates the striking of these coins in the third century A.D. when Latin inscriptions indicate an alliance between Rome and Hatra. Until more evidence is forthcoming, this hypothesis must remain in limbo with the others we have reviewed.

[38] See J. Teixidor, "Notes Hatréennes," *Syria*, 41 (1964), pp. 273–84; J. B. Segal, *Edessa 'The Blessed City'* (Oxford, 1970), p. 60; M. Gawlikowski, "Nouvelles inscriptions du camp de Dioclétian," *Syria*, 47 (1970), pp. 313–17.

[39] Milik, p. 399.

[40] H. Seyrig, "Tresor monétaire de Nisibe," *RN*, 5th ser., vol. 17 (1955), p. 89, nos. 13, 14; with discussion pp. 107–8.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Three examples of the camel with rider and one of the camel alone were found in the hoard; a few other specimens exist in public and private collections.[41]

Seyrig dated these uninscribed coins to the late second or early first century B.C. on the basis of their comparatively good style. He interpreted the obverse type as a representation of the sun, perhaps Shamash, or a king radiate in the manner of Antiochus VIII on Seleucid issues. The reverse rider bears a close resemblance to the god Arsou on monuments of Palmyra, but Seyrig hesitated to assign the coins to a city that was in its infancy at the time.

In this writer's judgment no one of these issues belongs to Hatra. The fact that no examples have been found in the extensive excavations there is in itself a telling argument,[42] as is the complete lack of evidence for the cult of Sin at Hatra.[43] With regard to the camel coins, the Nisibis Hoard was buried ca. 32/31 B.C. at the latest, and it is most unlikely that Hatra was anything more than a caravan stop at that early date.

[41] A coin in the cabinet of the American Numismatic Society is reproduced, PLATE 7, C.

[42] Teixidor was under the erroneous impression that Sin coins had been found at Hatra, but Walker states that both coins cited in his article had been found in a pot at Assur, together with Greek Imperials of Nerva, Trajan, Hadrian and Antoninus Pius.

[43] Some 300 inscriptions have been recorded in the course of the excavations; none mention Sin.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

CHEMICAL COMPOSITIONS OF COPPER-BASED ROMAN COINS. II: AUGUSTUS AND TIBERIUS

G. F. Carter
T. V. Buttrey

Chemical analysis of ancient coins can enable us to differentiate among ore sources, determine whether the coinage metal is virgin material, indicate whether the metal has been alloyed and with what other metals and to what extent, arrange the issues in chronological order, specify where they were minted, and verify whether the coins are indeed ancient. Useful results depend on the quantity and quality of information available. A previous article concerned with some copper-based coins of Augustus and Tiberius has shown that nearly all were made from virgin materials—older coins were not melted to provide metal for the new coinage; that several compositional groups could be determined in correlation with issue; that the compositions of copper-based coins minted in Rome and Lugdunum differ markedly from those minted elsewhere in the Empire, while they also differ from those of coins minted in Rome both earlier and later; and that a unique ore source was used for coins minted in the period A.D. 22–30.[1]

The results of the first paper in this series were based on non-destructive analyses of 70 Roman coins of Augustus and Tiberius, 32 of which were struck in Rome. Additional analyses are required to obtain further information about their issues. At present only a good beginning has been made; ideally, analyses should be available for several examples

[1] G. F. Carter, "Compositions of Some Copper-Based Coins of Augustus and Tiberius," *Science and Archaeology* (Cambridge, Mass., 1971), pp. 114–30. Note that throughout this paper the dates assigned to individual issues are conventionally those of the *BMCRE*, or for the DIVVS AVGVSTVS issues, of Sutherland; except where noted we do not raise the question of their accuracy.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of each denomination, date and variety. This paper presents the results of the X-ray fluorescence analysis of a group of 21 copper-based coins of Augustus and Tiberius.[2] The object of the investigation is to compare these analyses with those previously made of other Augustan and Tiberian coins, to investigate the unusual composition of very early Augustan *aes* coinage, to contrast orichalcum (brass) coins with those of pure copper, and to confirm the unusual nickel concentrations previously found in coins minted in A.D. 22–30.

Several investigators have previously determined the compositions of some Roman coins. The most noteworthy of these is E. R. Caley, whose analysis by wet chemical methods involved the destruction of the coin.[3] Two sestertii of Augustus and one of Tiberius were among the coins analyzed; their compositions appear in Table 1. L. H. Cope has analyzed many third- and fourth-century Roman coins,[4] but few other published analyses have been trustworthy and complete. Many cover the major metal content only (gold, silver, copper), although the trace metal content is also very important.

Several methods are currently in use to analyze ancient coins: wet chemistry, X-ray fluorescence, emission spectroscopy, neutron activation, electron microprobe, and atomic absorption. Each method has its advantages and disadvantages, none being clearly superior to all the others. The variety in composition of ancient coins complicates the problem since most methods are relatively good for certain elements

[2] Most of the coins reported on in this paper are from the British Museum; the remaining coins are from the authors' collections. The X-ray fluorescence measurements presented for the 21 coins recently analyzed were carried out on the General Electric XRD-6 unit located at the Kelsey-Hayes Research and Development Center. Without the support of both the British Museum and the Kelsey-Hayes Corporation this work would not have been possible, and we acknowledge with thanks the helpfulness of these institutions.

[3] E. R. Caley, *Analysis of Ancient Metals* (New York, 1964); *Orichalcum and Related Ancient Alloys*, ANSNNM 151 (New York, 1964).

[4] L. H. Cope, "The Compositions of 35 Roman Bronze Coins of the Period A.D. 284–363," *BullHistMetalGroup*, vol. 1, no. 9 (1967), pp. 1–6; "Chemical Analyses of 31 Large Roman Bronze Coins Minted Between A.D. 294–307," *BullHistMetalGroup*, vol. 2, no. 2 (1968), pp. 70–72; "The Chemical Composition of the Bronze Coinage of Maxentius, A.D. 306–312," *BullHistMetalGroup*, vol. 2, no. 2 (1969), pp. 62–64.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Table 1

Caley's Analysis of Sestertii of Augustus and Tiberius[a]

Coin No.	*Moneyer or Type*	*BMCRE No.*	*Date*	Fe %	Ni %	Cu %	Zn %	As %	Ag %	Sn %	Pb %	S %
1.	Surdinus	141	23 B.C.	0.38	N	77.36	21.88	—	N	0.17	0.16	0.03
2.	Gallus	157	22 B.C.	0.49	0.04	76.70	22.02	T	0.04	0.27	0.37	N
3.	IVSTITIA	79	22–23 A.D.	0.26	0.03	76.86	22.85	N	N	0.03	0.04	N

[a] Caley, *Orichalcum*, pp. 56–57. No gold was detected. Arsenic was not detected in no. 3, and was not determined in nos. 1 and 2. T = trace. N = none detected.

Original from UNIVERSITY OF MICHIGAN

but fair to poor for others. The best policy for the numismatist is to accept the estimates of error given in each publication and not to take too seriously some of the generalizations condemning individual methods. Analytical techniques are changing rapidly, and what is impossible today may be possible tomorrow. Some generalizations made in the past are no longer true, so that the numismatist should maintain an open mind about all methods of analysis.[5]

ANALYTICAL PROCEDURE

X-ray fluorescence is a non-destructive method of analysis in which X-rays of many wavelengths are directed upon a coin, so that each element in the coin emits X-rays having a specific energy characteristic of that particular element. The number of emitted characteristic (fluorescent) X-rays of any element is proportional to the concentration of that element: the greater the intensity of X-rays, the higher the concentration of the corresponding element. Standard specimens of copper and brass alloys, whose compositions have been certified by the National Bureau of Standards, are used to calculate the weight percent of each element present in the coin. In previous work the following elements were frequently found to be present and to vary significantly in copper coins: iron, nickel, zinc, silver, tin, antimony, lead, and, of course, copper.[6] Cobalt and arsenic are sometimes present in low concentrations. These ten elements account for essentially all of the metal content of the coin.

The characteristic X-rays of most of the above ten elements do not penetrate very far in copper alloys because of their low energies. An average depth of penetration is about 0.0005 cm (5μ or 0.0002 inch). Accordingly, in X-ray fluorescence the metal is analyzed only to a depth of about 5μ; one must therefore be careful that the surface of the

[5] Summaries of several analytical techniques are presented in E. T. Hall and D. M. Metcalf, *Methods of Chemical and Metallurgical Investigation of Ancient Coinage* (London, 1972), including an extensive bibliography of coin analyses by P. Naster and T. Hackens, "Bibliographie commentée des analyses de laboratoire appliquées aux monnaies grecques, romaines, et celtiques," pp. 327–70.

[6] Carter, "Compositions" and earlier articles cited therein.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

coin is representative of its entire composition. This is usually the case if the coins are treated in an air blast containing fine aluminum oxide powder to remove oxide and dirt from the surface.[7] Approximately 10μ of metal are removed, but the condition of the coin remains the same to the human eye. This cleaning procedure results in a matte finish on the coins which darkens naturally in a few weeks. A very small amount of aluminum oxide remains in any deep crevices present on a given coin, usually on the coin edge. However, since aluminum does not occur at detectable levels in copper coins, its small presence does not affect the analyses.

X-ray fluorescence analysis has several advantages as a method of analyzing ancient coins: it is non-destructive, relatively rapid, reproducible, and not as subject to human error as are wet chemical methods. Further, rapid advances in electronics are resulting in improved analyses: with the most recent instrumentation, X-ray fluorescence analyses in the parts per million range are becoming routine. In this investigation the lower limit of detection of elements such as iron, cobalt, nickel, tin, and antimony is about 0.002 to 0.004% or 20 to 40 parts per million. When the lower limit of detection of most elements is extended to very low concentrations, such as 1–10 parts per million, analyses for additional elements usually associated with copper ores, such as gold, selenium, tellurium, bismuth, and mercury, should provide additional useful information. The analyses reported here were carried out using a General Electric XRD-6 X-ray fluorescence spectrometer.

The *accuracy* of an analytical determination is the proximity of measured value to the true value, whereas *precision* is a measure of the reproducibility of the analytical determination. For example, if three typical determinations of silver in a copper coin were 1.1%, 1.3% and 1.5%, the precision is approximately $\pm$ 0.2%, and the reported value is $1.3 \pm 0.2\%$. If the true value is 1.0% silver, then the accuracy is 0.3%. Note that the precision often has a smaller value than the accuracy. In general this is true for X-ray fluorescence determinations; however, the information sought frequently depends mainly on the precision—it is important to know the relative concentrations of an element such as tin,

[7] Carter, "Preparation of Ancient Coins for Accurate X-Ray Fluorescence Analysis," *Archaeometry*, 7 (1964), pp. 106–13.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

silver, or antimony in a series of coins, whereas little additional information is obtained if the true values are known accurately. For example, if a group of coins is found to contain 0.045, 0.060, 0.070, 0.095, and 0.110% antimony, and if the precision is $\pm$ 0.003%, then these results are meaningful in spite of the fact that the true values may actually be 0.035, 0.050, 0.060, 0.085, and 0.100% antimony respectively. Hence increasing the precision (decreasing the experimental variation) and decreasing the lower limit of detectability are the most worthwhile goals in X-ray fluorescence analysis; increasing the accuracy is primarliy important in comparing results from different laboratories.

Inspection of the X-ray fluorescence analyses of Roman coins in this paper shows that the results are meaningful: the precision is good enough to allow differentiation of the coins into various compositional groups. At low levels of concentration, the precision is approximately equal to the lower limit of detection, which is about 0.002% for iron, 0.003% for antimony and tin, 0.004% for nickel and cobalt, 0.01% for zinc and silver, and 0.02% for lead. Accuracy is not as good as the precision. The accuracies of these X-ray fluorescence determinations may be improved by the use of standard alloys whose compositions are more nearly the same as that of the coins. The future appears most promising for obtaining a wealth of useful information about ancient coins by X-ray fluorescence provided an adequate supply of coins is made available to analysts.

PHYSICAL MEASUREMENTS

Coins which have been analyzed and reported in this paper have been accurately weighed and measured with a micrometer and caliper. The combination of weight, maximum diameter, minimum diameter, and maximum thickness serves to "fingerprint" a given coin. Unless the piece is physically damaged in the future, these measurements should in nearly all cases serve to identify it for all time. The practice of publishing physical measurements of each specimen should, therefore, enable analysts to avoid unsuspected duplication of analyses in the future.

In addition to these measurements, the densities of the coins have also been taken. The densities indicate whether the coin is porous or

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

whether it is sound metal. Occasionally voids are present due to gas bubbles formed during solidification; grain boundary corrosion may also occur in the interior of the piece.[8] Physical measurements for the 21 coins of Augustus and Tiberius reported here for the first time appear in Table 2. All except R-740 were struck at the Rome mint. Notice that nearly all of the pure copper coins have densities very close to the reported value of 8.92 g/cm^3 for pure copper.[9] Mattingly[10] reports that Julio-Claudian asses range in density from about 8.5 to 8.8 with an average of about 8.7 g/cm^3. These earlier results are quite low and reflect poorer techniques of measurement. In measuring the density of a coin, one must be careful to avoid small air bubbles which tend to cling to the surface of the coin as air is expelled from crevices or depressions, causing the density to appear lower than the true value. Low and variable densities also result from the presence of oxides on the surfaces of the coins (oxides were removed from the coins in this investigation prior to measurement of densities). Not only are the present density measurements much closer to the density of pure copper than the densities reported by Mattingly, but the precision is much better in the recent measurements: 8.88 $\pm$ 0.06 g/cm^3 compared with previous values of 8.7 $\pm$ 0.15 g/cm^3.

The densities of brass coins are appreciably lower than those of nearly pure copper coins—from 8.52 to 8.64 g/cm^3 for the brass—because of the alloy of zinc which has a lower density than copper. According to Mattingly, "it is unfortunately impossible to distinguish brass from copper by density."[11] Our results from oxide-free coins show that this is no longer true since orichalcum pieces clearly register lower densities than copper asses or quadrantes.

[8] Metals consist of very small grains, or crystals, which are oriented in more or less random directions. The narrow regions between grains are called grain boundaries. In some metals the grain boundaries corrode while the grains do not. Thus grain boundary corrosion may in some cases lead to changes in composition. This is highly unlikely in the nearly pure copper coins studied in this investigation.

[9] The density of R-740, with types of an Augustus as of 23 B.C. but containing a high proportion of lead, is 8.53 g/cm^3, much lower than the densities of 8.82–8.94 g/cm^3 usually obtained for copper coins. The piece is probably an ancient counterfeit.

[10] H. Mattingly, *BMCRE* 1, pp. lvi–lvii.

[11] Mattingly, p. lvi.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Table 2

Catalogue Description and Physical Measurements

Denomination	*Moneyer or Type*	*BMCRE No.*	*BMCRE Date*	*Weight* (g)	*Maximum Diameter* (cm)	*Minimum Diameter* (cm)	*Maximum Thickness* (cm)	*Density* (g/cm^3)	*Coin No.*
			B.C.						
Dupondius	Surdinus	141	23	9.7421	2.70	2.64	0.234	8.64	R-747
As	Piso	137	23	10.9629	2.86	2.63	0.267	8.87	R-749
As	Piso	137	23	7.9667	2.72	2.64	0.214	8.90	R-750
As	Surdinus	145	23	8.5078	2.70	2.28	0.250	8.53	R-740
As	Lupercus	174	22	10.2680	2.78	2.70	0.250	8.89	R-753
Quadrans	Pulcher etc.	205	ca. 8	2.6935	1.78	1.70	0.161	8.98	R-728
As	Otho	226	7	6.2459	2.64	2.42	0.220	8.77	R-633
As	Quinctilianus	237	6	10.3141	2.64	2.40	0.299	8.88	R-751
As	Messalla	241	6	13.1250	2.67	2.54	0.361	8.87	R-752
Quadrans	Bassus	265	ca. 4	2.4746	1.61	1.54	0.206	8.93	R-748
Quadrans	Capella	267	ca. 4	3.1543	1.50	1.44	0.276	8.94	R-727

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Denomination	*Moneyer or Type*	*BMCRE No.*	*Date*	*Weight* (g)	*Maximum Diameter* (cm)	*Minimum Diameter* (cm)	*Maximum Thickness* (cm)	*Density* (g/cm^3)	*Coin No.*
			A.D.						
As	DIVVS AVGVSTVS / "Livia"	151	15–16	10.1612	2.72	2.54	0.221	8.90	R-764
Sestertius	CIVITATIBVS ASIAE	70	22–23	22.7122	3.27	3.17	0.418	8.52	R-770
As	Drusus	99	22–23	9.1767	3.13	2.91	0.213	8.86	R-756
As	Drusus	99	22–23	10.0910	2.84	2.73	0.250	8.89	R-757
As	Drusus	99	22–23	9.7491	3.05	2.74	0.248	8.89	R-758
As	DIVVS AVGVSTVS / Altar	149	22/23–30	9.0404	2.83	2.67	0.232	8.82	R-759
As	DIVVS AVGVSTVS / Altar	149	22/23–30	10.2445	2.64	2.52	0.332	8.89	R-760
As	DIVVS AVGVSTVS / Altar	149	22/23–30	8.7381	2.81	2.59	0.291	8.85	R-761
As	DIVVS AVGVSTVS / Altar	149	22/23–30	9.2076	2.83	2.62	0.276	8.90	R-762
As	DIVVS AVGVSTVS / Altar	149	22/23–30	9.7722	2.90	2.67	0.269	8.88	R-763

Note: The coins were numbered by the order in which they were received; "R" designates "Roman."

Original from UNIVERSITY OF MICHIGAN

COMPOSITION OF AUGUSTAN COINS

The compositions of Augustan copper-based coins minted in Rome are presented in Table 3. Analyses of the coins from Carter, "Compositions," are included for comparison. The first Augustan copper-based coins were struck, according to Mattingly, in 23 B.C. They represented a radical change from Republican copper-based coins, which were drab and of poor workmanship, and which frequently contained high concentrations of lead, antimony and arsenic,[12] which affected their color adversely. The only coins approaching the composition of Republican asses are the Surdinus as, R-740, which has a high lead, antimony and tin content, and the Lupercus as, R-753. R-740 also contains much less iron and silver than the other asses struck in 23 B.C. The other Surdinus asses, R-257 and R-281, have a composition similar to most of the other asses of the year: relatively high iron, nickel, antimony and silver. R-740 is therefore likely not official and may well have been produced from the melting of Republican *aes* coin. The composition of the Lupercus as, R-753, is unique. Its nickel, silver and antimony contents are the highest of any copper-based Roman coin of the early Empire analyzed to date. Its high antimony is reminiscent of the unusually high content found in some Republican copper-based coins (to be published).

Since only four Augustan orichalcum dupondii and sestertii have been analyzed, there are insufficient data from which to generalize. The orichalcum coins are noteworthy for their modest nickel content, and they vary moderately in zinc. R-262 (precise issue unknown), R-78 and R-261 contain lower antimony than the asses of 23 B.C. In the issues of 21 and 17 B.C. the silver and iron remain relatively high. The compositions of these coins are in reasonable agreement with Caley's analyses of three sestertii (see Table 1).

The Agrippa, Tullus and Otho asses of 7 B.C. show marked differences in composition from the earlier asses: the silver content is a little lower, the nickel much lower, and the antimony very much lower. Compositions of the three Otho asses vary somewhat in nickel, silver, tin and lead.

[12] Carter, "Compositions," pp. 125–28.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

TABLE 3

Chemical Compositions of Copper-Based Coins of Augustus

Denomination	*Moneyer*	*BMCRE No.*	*Date*	Fe %	Co %	Ni %	Cu %	Zn %	As %	Ag %	Sn %	Sb %	Pb %	*Coin No.*
			B.C.											
Dupondius	Surdinus	141	23	.14	N	.08	85.0	14.3	N	.06	.039	.21	.13	R-747*
As	Piso	137	23	.24	N	.22	98.4	N	.03	.27	.03	.51	.15	R-259
As	Piso	137	23	.51	.005	.21	98.8	N	N	.10	.0112	.25	.08	R-749*
As	Piso	137	23	.16	N	.23	99.3	.02	N	.10	.0070	.30	.06	R-750*
As	Surdinus	143	23	.16	N	.20	98.8	N	.05	.13	.015	.35	N?	R-257
As	Surdinus	145	23	.18	N	.24	98.7	.01	.02	.12	.07	.25	.12	R-281
As	Surdinus	145	23	.01	N	.10	80.8	N	N	.08	6.5	.41	12.0	R-740*
Sestertius	[ ]	—	23–17	.15	N	.005	81.8	17.5	N	.07	.02	.01	.06	R-262
As	Lupercus	174	22	.25	T	.98	95.8	N	N	.76	.019	1.9	.27	R-753*
Sestertius	Lamia	175	21	.38	N	.015	78.8	21.1	N	.18	.03	.08	.12	R-78
Dupondius	Sanquinius	193	17	.33	.005	.02	81.7	17.2	.15	.12	.15	.015	N?	R-261
As	Agrippa	214	7	.11	.005	.06	99.4	N	.02	.07	.015	.015	.05	R-253
As	Tullus	220	7	.07	N	.04	99.4	N	.03	.08	.06	.01	.03	R-298
As	Tullus	220	7	1.48	.03	.10	97.9	.04	.03	.08	.03	.015	.19	R-600
As	Otho	226	7	.19	N	.025	99.4	N	N	.06	.015	.01	N	R-254
As	Otho	226	7	.085	N	.07	99.3	N	.02	.09	.05	.015	.08	R-297
As	Otho	226	7	.12	N	.10	99.7	N	N	.04	.01	.02	.055	R-633*
As	Quinctilianus	237	6	.091	N	.07	99.7	N	N	.06	.019	.028	.04	R-751*
As	Messalla	241	6	.14	N	.08	99.6	N	N	.10	.0071	.035	N	R-752*
Quadrans	Pulcher etc.	205	ca. 8	.06	N	.025	99.6	N	N	.04	.02	.13	.04	R-728*
Quadrans	Messalla etc.	261	ca. 5	.05	N	N	99.6	N	N	.04	.01	.03	.04	R-80
Quadrans	Bassus	265	ca. 4	.14	N	.025	99.7	N	N	.04	.0039	.039	N	R-748*
Quadrans	Capella	267	ca. 4	.09	N	.02	99.7	N	N	.05	.01	.08	.04	R-727*

N = None detected; N? = corrected for As and perhaps overcorrected; T = Trace (≤ 0.005%). *Coin numbers so indicated are derived from Table 2; the remainder are included from Carter, "Compositions."

Original from UNIVERSITY OF MICHIGAN

Analyses of others of his coins should reveal whether this variation is simply random or whether there are specific compositional groups in Otho's issue. Coin R-600 is unusual in its high iron content (1.48 %). However, in general, the Augustan coins datable to 7–4 B.C. contain lower concentrations of iron than do the coins of 23–17 B.C. The asses of 6 B.C. are notable for their significantly higher antimony content. Otherwise their compositions are very similar to those of the asses assigned to 7 B.C.

The Augustan quadrantes, on the other hand, are significantly different in composition from the asses of 7–6 B.C. On the average they reveal slightly lower iron concentrations, lower silver, much lower nickel, and especially higher antimony. The quadrantes stand as a distinct compositional group from the asses and doubtless were minted after all the Augustan asses attributed to 7–6 B.C. Mattingly's chronology provides an overlap in the colleges of Lamia, Silius, and Annius, and Pulcher, Taurus and Regulus, whose quadrantes he assigns to ca. 9 and 8 B.C., before the asses of Agrippa, Tullus and Otho. The analyses suggest that this chronology cannot be sustained.

COMPOSITION OF TIBERIAN COINS

The compositions of Tiberian copper-based coins minted in Rome are presented in Table 4, where again the results of the current investigation are combined with those of Carter, "Compositions." The Tiberian coins of A.D. 15–16 differ in composition from the Augustan asses and quadrantes of ca. 9–4 B.C. in several ways: the silver contents are lower; the antimony is very low; and no lead was detected (< 0.02% Pb). R-258 was struck in A.D. 15–16 during Tiberius's TRP XVII; Sutherland dates the DIVVS AVGVSTVS issue with "Livia" reverse to these years as well.[13] The nearly identical compositions of the three coins—note the simultaneous low or undetectable cobalt and nickel—provide strong support for Sutherland's chronology, although analyses of several more coins would be helpful in confirmation.

[13] C. H. V. Sutherland, "Divus Augustus Pater," *NC*, 6th ser., vol. 1 (1941), pp. 97–116.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

R-250 and R-251 are dated to A.D. 22–23 from Tiberius's TRP XXIV and Drusus's TRP ITER. Here, where contemporaneity is certain, the consistency of the analyses is confirmed as meaningful, though some variation in metallic content is still possible. Note especially the occurrence of iron in the several examples; the variation in iron concentration may be due to iron contamination from containers for the molten copper. This would account for the variability of iron in similar coins. The group of asses struck in A.D. 22–23 are otherwise homogeneous in their chemical composition. All exhibit two unusual features: relatively high nickel content, and the presence of cobalt in low concentrations. Additional characteristics include very low silver, tin, antimony and lead concentrations. The high nickel contents are unique for any period of Roman Imperial coins thus far analyzed. Note that even the Augustan asses of 23 B.C. contain less, from 0.20 to 0.24%, compared with 0.25 to 0.37% nickel in the coins struck in A.D. 22–23.

The Tiberian sestertius, R-770, A.D. 22–23, is the only orichalcum coin of the reign analyzed in this investigation. Its composition is similar to that of the other coins of its period with two major exceptions: the relatively high tin content, which is higher than that of any other coin in this report (save R-740), and the low nickel content (normal in Augustan orichalcum) which is in contrast to the relatively high nickel concentration found in all the pure copper asses of the Augustan moneyers and of A.D. 22–23.

The compositions of the nine Tiberius DIVVS AVGVSTVS asses (*BMCRE* 1 Tiberius 147) are most interesting. R-476 is certainly one of the common imitations of the type, given its small size and inferior style. Its composition is also quite different from the norm, most significantly in the very low nickel and higher tin content. Of the other eight pieces, six (R-96, R-252, R-605, R-760, R-761, R-762) reveal compositions typical of the asses of A.D. 22–23, including the unusually high nickel content and the presence of cobalt (not in R-761) as well as the very low silver, antimony, tin, and lead. Iron is present within the range of the asses of A.D. 22–23 though not in such variation. Here again Sutherland's chronology of the DIVVS AVGVSTVS issues seems to be confirmed.

R-759 and R-763 however are quite different from the other examples of *BMCRE* I Tiberius 147. These two have very low nickel contents and

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Table 4

Chemical Compositions of Copper-Based Coins of Tiberius

Denomination	*Type*	*BMCRE No.*	*Date*	Fe %	Co %	Ni %	Cu %	Zn %	As %	Ag %	Sn %	Sb %	Pb %	*Coin No.*
			A.D.											
As	"Livia"	68	15–16	.12	N	N	99.5	N	.03	.03	.01	.01	N	R-258
As	DIVVS AVGVSTVS / "Livia"	151	15–16	.065	N	N	99.6	N	N	.03	.015	N	N	R-245
As	DIVVS AVGVSTVS / "Livia"	151	15–16	.20	N	.03	99.7	N	N	.03	.003	.010	N	R-764*
Sestertius	CIVITATIBVS ASIAE	70	22–23	.21	N	.02	83.0	16.5	N	.01	.17	.014	.02	R-770*
As	Tiberius	91	22–23	.03	.01	.28	99.3	N	N	.03	.015	N	N	R-250
As	Tiberius	91	22–23	.03	.005	.25	99.4	N	N	.01	.01	N	N	R-251
As	Drusus	99	22–23	.09	.015	.28	99.3	N	N	.01	.01	N	N	R-60
As	Drusus	99	22–23	.015	.005	.28	99.4	N	N	.03	.01	N	N	R-249
As	Drusus	99	22–23	.24	.025	.32	99.0	N	.03	.04	.04	N	.02	R-299
As	Drusus	99	22–23	.083	.01	.29	99.6	N	N	.02	.0050	.009	N	R-756*

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Denomination	*Type*	*BMCRE No.*	*BMCRE Date*	Fe %	Co %	Ni %	Cu %	Zn %	As %	Ag %	Sn %	Sb %	Pb %	*Coin No.*
As	Drusus	99	22–23	.123	.005	.34	99.5	N	N	.03	.0051	.0081	N	R-757*
As	Drusus	99	22–23	.15	.01	.37	99.4	N	N	.03	.0044	.0070	N	R-758*
As	DIVVS AVGVSTVS / Altar	147	22/23–30	.085	.015	.27	99.3	N	N	.02	.01	N	N	R-96
As	DIVVS AVGVSTVS / Altar	147	22/23–30	.03	.025	.31	99.3	N	N	.04	.01	N	.02	R-252
As	DIVVS AVGVSTVS / Altar	147	22/23–30	.10	.01	.30	99.3	N	N	.03	.015	.01	.04	R-605
As	DIVVS AVGVSTVS / Altar	147	22/23–30	.0123	N	.03	99.8	.05	N	.05	.0071	.111	N	R-759*
As	DIVVS AVGVSTVS / Altar	147	22/23–30	.057	.005	.34	99.6	N	N	.03	.0022	.0039	N	R-760*
As	DIVVS AVGVSTVS / Altar	147	22/23–30	.064	N	.23	99.7	N	N	.03	.0023	.0053	N	R-761*
As	DIVVS AVGVSTVS / Altar	147	22/23–30	.070	.01	.29	99.5	N	N	.03	.0052	.009	.03	R-762*
As	DIVVS AVGVSTVS /Altar	147	22/23–30	.029	N	.03	99.6	.11	N	.08	.0071	.049	.09	R-763*
As	DIVVS AVGVSTVS / Altar (imitation)	147	—	T	N	N	99.7	N	.04	.08	.04	.03	.01	R-476

N = None detected; T = Trace (< 0.005%). *Coin numbers so indicated are derived from Table 2; the remainder are included from Carter, "Compositions."

Original from UNIVERSITY OF MICHIGAN

no cobalt—typical of the asses of A.D. 15–16 and even of the Augustan quadrantes. However they also have very low iron contents, and reveal the presence of a small amount of zinc, somewhat higher silver contents than other coins of A.D. 15–30, and higher antimony than any coins in the period 7 B.C. to A.D. 30 except for the Augustan quadrantes. Coin R-763 also has a higher lead content than usual for coins minted from 6 B.C. to A.D. 30 (save R-600); in fact, it has a composition very close to that of R-97 (A.D. 34–35) and others dated A.D. 34–37.[14] It thus approaches the upper end of Sutherland's chronology for the type. An alternate possibility is that coins R-759 and R-763 were made from the melting of older coins or objects: the low zinc concentration suggests that a few orichalcum coins or objects may have been inadvertently melted with the pure copper.

CONCLUSIONS

While much more elaborate results would emerge from the analysis of many hundreds of pieces, these 21 coins help to enlarge our apprehension of the Augustan and Tiberian *aes*. First, it is not yet possible to construct an absolute chronology, a problem on which so much effort has already been expended. But the relative chronology and composition of two colleges of Augustan moneyers has been confirmed. In the Tiberian *aes* two major congruences of the emperor's and the DIVVS AVGVSTVS types seem certain. Further, the separation of the Augustan quadrantes from the issues of the other denominations is now necessary. One might question whether the quadrantes *are* Augustan at all,[15] a question which cannot be faced until a great many analyses are in hand. We anticipate that such analyses will be available in the near future and that their publication will help materially in solving this problem.

Again, the results of this investigation suggest the possibility that the metallic difference between orichalcum and copper was not simply

[14] Carter, "Compositions," pp. 124–25.

[15] L. Laffranchi argued in, "Le ultime monete romane col nome dei triumviri moneterii," *RIN* (1911), pp. 319–27, that they are all post-Augustan, but he met with little favor.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

that the former was composed of copper alloyed with zinc and the latter of pure copper. Note the remarkably low level of nickel in both the Surdinus dupondius when compared with his asses, and the Tiberius sestertius when compared with his contemporary asses. There may be evidence here for a distinct production of orichalcum coins on the one hand, copper on the other; and thereby an explanation of the curious fact that after the two earlier colleges, the Augustan moneyers struck either orichalcum or copper, but not both. Finally, this investigation has proved the utility of the analysis of trace elements and suggests caution in the employment of earlier analyses limited to the major metals.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

A NOTE ON TRAJAN'S LATIN *AES* FROM ANTIOCH

(PLATES 8–9)

WILLIAM E. METCALF

A substantial group of Trajanic *aes* has long been recognized as the product of a mint outside Rome. The coins, which were struck in two denominations, are set apart from their Roman counterparts by a somewhat lighter weight standard, the use of a radiate crown on both denominations, and the character of the reverse type, which, as Mattingly put it, is "subtly but unmistakably foreign to the regular practice of the Roman mint."[1]

1. *Obv.*: IMP CAES NER TRAIANO OPTIM(O) AVG GERM
   Bust of Trajan radiate r. with (a) drapery on l. shoulder (PLATE 8, 1) or (b) aegis on l. shoulder (PLATE 8, 2) or (c) full drapery (PLATE 8, 3) or (d) drapery and cuirass.
   Rev.: DAC PARTHICO P M TR POT XX COS VI P P
   S C in laurel wreath.[2]

2. *Obv.*: IMP CAES NER TRAIAN OPTIM AVG GER DAC PARTHICO
   Bust (a), (b), (c), or (d) (PLATE 8, 4).
   Rev.: P M TR POT XX COS VI P P
   S C in laurel wreath.[3]

The mint has not been identified with certainty, although scholarly consensus favors the East. Strack, following a tentative suggestion made by Mattingly, speculated that it may have been located in Commagene

[1] H. Mattingly, *BMCRE* 3, p. cviii.
[2] "As" (*BMCRE* 3 Trajan 1090–95) or "semis" (*BMCRE* 3 Trajan 1100–4).
[3] "As" (*BMCRE* 3 Trajan 1096–99) or "semis" (*BMCRE* 3 Trajan 1105).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

or on Cyprus. Mattingly later proposed Antioch as another possibility, but maintained his preference for Cyprus on grounds of style; this view has lately been endorsed by A. S. Robertson. Six "asses" and eleven "semisses" of this group were recovered in the excavations at Antiochia-ad-Orontem as against only seven coins of the mint of Rome; this was enough to convince D. B. Waage that the coins were struck at Antioch itself.[4]

Confirmation of this view can now be provided. Many of the "asses" are countermarked, some of them twice. One of the countermarks consists of a bucranium in a circular incuse, which usually appears behind Trajan's bust (PLATE 8, 5).[5] The type is uninformative and since the countermark appears on no other coins it is of no use for attribution. The second countermark, a laurel branch in a rectangular incuse, is usually placed on Trajan's neck or just before his bust (PLATE 8, 6–7).[6] Again the type is uninformative, but in this case the countermark is found on a second group of coins: the Greek-legend "dupondii" of Antioch with rev. S C in laurel wreath (PLATE 9, 8).

The purpose of the countermark cannot be determined: it appears only sporadically on coins of both groups. Its date can be more confidently estimated since the latest coins which bear it are the Hadrianic "dupondii" of Antioch, all of which may be assigned to the first years of Hadrian's reign on the basis of their early portraits and long, dynastic

[4] Mattingly, p. cviii and *RIC* 2, p. 290 n.; P. L. Strack, *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts*, 1 (Stuttgart, 1931), pp. 232–33; Robertson, *Hunter Cab.* 2 (Oxford, 1971), pp. x, 68; D. B. Waage, *Antioch-on-the-Orontes*, vol. 4, pt. 2: *Greek, Roman, Byzantine and Crusaders' Coins* (Princeton, 1952), p. 94.

[5] This countermark is found on *BMCRE* 3 Trajan 1095, 1098 and on six specimens in the ANS (Holzer collection).

[6] This countermark is found on *BMCRE* 3 Trajan 1095; Cahn 71 (14 October 1931) 1555; and two specimens in the ANS (Holzer collection). It occurs on Greek-legend Æ of Trajan (*BMCGalatia* Antioch 273, 286; seven specimens in the ANS) and Hadrian (*BMCGalatia* Antioch 295, 299; *SNGCop Cyprus* Syria Cities 209, where it is described as a butterfly; four specimens in the ANS; and three found at Antioch, Waage, no. 434). Michael Grant noted the possible significance of the laurel branch countermark without observing that it is common to the Greek and Latin legend coins of Antioch in "Asses of Orichalcum," *ANSCent.*, p. 298.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

legends (PLATE 9, 9–10). The countermark may have been applied in Antioch itself, since the laurel branch is an obvious symbol of Apollo, one of the city's chief deities, and had been employed as a reverse type on its coinage;[7] but whether or not the *locus* of the countermark can be determined, its occurrence on these two series, and these two only, confirms Waage's attribution of the Latin *aes* to Antioch.

This attribution is consistent with the jubilee character of the issue, which has long been recognized:[8] the use of Latin rather than Greek legends, the extended titulature, and the radiate crown all indicate that the coinage commemorates Trajan's twentieth renewal of the *tribunicia potestas* on 10 December 115.[9] The anniversary was a significant one, for no emperor since Tiberius had held the tribunician power 20 times; and its commemoration at Antioch was apposite since Trajan was almost certainly in the city on the date of the renewal.[10]

The mint of Antioch soon reverted to its traditional Greek legend and format, but the influence of Trajan's anniversary coinage upon subsequent issues is evident. Coins bearing the title Παρθ and hence struck during the last 18 months of his reign show a vast improvement in style; the draped bust, regular on the Latin coinage but otherwise absent from the Greek, is adopted (PLATE 9, 11, 12); and the radiate crown, otherwise rare on the *aes* of Antioch, appears occasionally (PLATE 9, 13).

There remains only the question of denomination. Strack called the anniversary coins dupondii and "half-dupondii," apparently because they were struck in orichalcum; others regard them as asses and semisses, although the coins are somewhat lighter than the corresponding

[7] For example, *BMCGalatia* Antioch 71–73, etc.

[8] F. A. Lepper, *Trajan's Parthian War* (Oxford, 1948), p. 38, n. 2.

[9] A parallel to the use of the radiate crown in commemoration of the *vicennalia* may be found at Alexandria, where in 115/16 there are three tetradrachm issues distinguished by obverse legend and type: one portraying Trajan laureate without Παρθ, another showing him radiate without Παρθ, and a third on which he appears radiate with Παρθ. The second of these probably began soon after 10 December.

[10] Trajan was certainly in Antioch three days later, when members of his retinue were among the victims of the earthquake of 13 December (Dio 68.24.1; Lepper, p. 209).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

denominations struck at Rome. They do, however, fit rather neatly into a metrological pattern consistent with that of the Greek legend coins of Antioch; if, as Wruck thought, those are dupondii and asses, Trajan's Latin issues are best regarded as asses and semisses.[11]

[11] Average weights, taken from published sources and from coins in the ANS, are as follows: for the Latin *aes*, 8.28 g for 31 examples of the larger denomination and 4.41 g for 16 examples of the smaller; for the Greek *aes*, 14.21 g for 37 examples of the larger denomination, 7.82 g for 10 examples of the smaller. See also W. Wruck, *Die syrische Provinzialprägung von Augustus bis Traian* (Stuttgart, 1931), p. 172.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

THE ANTIOCH HOARD OF ANTONINIANI AND THE EASTERN COINAGE OF TREBONIANUS GALLUS AND VOLUSIAN

(PLATES 10–18)

WILLIAM E. METCALF

In December 1975, a lot of 450 antoniniani of the mid-third century was brought to the American Numismatic Society for examination. The lot had been acquired at Antakya (ancient Antiochia-ad-Orontem); the vendor had been assured that the coins constituted part of a local find of some 1,500 pieces. It is at least certain that the 450 pieces described here were found together: when brought to the museum they were uniformly covered with a bright green accretion, probably of copper oxide, which was subsequently removed in a 10 percent solution of Complexone-III.

Since the vendor wished to dispose of the lot as quickly as possible, the coins were available for examination and study for only four days. Yet the close-knit character of the group demanded that some record of die combinations be made, and this was achieved with the invaluable assistance of Frances Schwartz.

The die study was conducted in the following manner. Coins were first sorted by reverse type; then the coins of each type were divided into groups on the basis of reverse die identity. This procedure was adopted for two reasons: the reverse dies offered more obvious points of contrast (the size of Mars's shield, whether his spear crossed inside or outside the shield, the point at which the spear intersected the surrounding legend, errors in the legend, etc.) than the obverses; and, at least theoretically, reverse die identity carried with it a greater likelihood of obverse identity than vice versa. (In fact, as the catalogue shows, there are almost as many cases of transferred reverse dies as

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of transferred obverse dies.) The groups of coins sharing common reverse dies were then subdivided on the basis of obverse die identity and the number of specimens of each die combination was recorded. The clearest examples of each die combination were extracted and the duplicates discarded. A check was then made for obverse die transfers.

Obviously any study conducted in the haste which these circumstances demanded is more prone to the admission of errors than one conducted at greater leisure; every step was taken to avoid such error. Mrs. Schwartz and the author checked and rechecked every instance of suspected die duplication; both confirmed the final record and are convinced that no error of substance remains.

CATALOGUE

The catalogue below lists 450 antoniniani from the Antioch Hoard. The mint's products are broken down by officina, then by rev. type. The legend is followed by an indication of officina marks, obv./rev., and the number of examples is given in parentheses. Dies are identified by number: obverses prefixed "T" are of Trebonianus, those prefixed "V" of Volusian. Reverse dies are numbered continuously irrespective of type. No attempt has been made to present the dies in the order in which they were actually used. In the unmarked officina, types are arranged in descending order of frequency in the hoard; in the second officina, the arrangement was dictated by convenience of illustrating die transfer among types. Weights are given for those pieces which could be weighed.

A complete record of dies represented in the hoard is on deposit at the American Numismatic Society. The museum has acquired those coins which are marked with an asterisk (*), and casts of coins representing all other die combinations have been made.

All dies are illustrated on PLATES 10–16.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.	*Rev.*	*Examples*	↑	↓	*Recorded weights*

UNMARKED OFFICINA

MARTEM PROPVGNATOREM – / – (340)[1]

(*RIC* Trebonianus 84, Volusian 219)

T1	1	18	0	18	3.86*
T1	2	16	16	0	4.30, 4.20, 3.79, 3.59, 3.52, 3.41, 3.36, 3.36, 3.23, 3.23, 3.10, 3.05
T1	3	28	14	14	4.15, 4.10, 3.96, 3.95, 3.88*, 3.85, 3.73, 3.70, 3.65, 3.54, 3.48, 3.42, 3.36, 3.14, 3.04, 2.95
T2	3	11	11	0	3.04*
T2	4	7	0	7	
T2	5	4	3	1	4.42*
T3	5	9	2	7	3.91*, 3.71*
T3	6	11	8	3	2.91*
T3	7	8	8	0	3.96*
T4	7	5	5	0	4.25*
T5	8	17	17	0	4.07*, 3.18*
T5	9	7	7	0	3.83*
T6	10	8	0	8	3.64*
T6	11	1	0	1	4.75*
T6	12	1	0	1	3.35*
T7	12 (see below)	6	6	0	
T8	12	3	2	1	
T8	13	1	1	0	3.32*
T9	12	1	1	0	3.40*
T9	14	1	1	0	

[1] Rev. dies 3, 27, 30 and 33 read MARTEM PRORVGNATOREM.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.	*Rev.*	*Examples*	↑	↓	*Recorded weights*
T10	14	11	0	11	4.46*
T11	14	1	1	0	4.15*
T11	15	1	0	1	4.42*
T11	16	1	0	1	3.58*
T12	17	1	0	1	
T12	18	2	2	0	3.59*
T12	19	4	4	0	4.34*
T13	19	34	34	0	2.93*
T14	20	7	7	0	3.57*
V1	20	1	1	0	3.36*
T15	21	3	0	3	3.48*
T15	22	2	0	2	4.24*
T16	23	1	0	1	
T17	24	11	0	11	3.92*
T17	25	5	5	0	4.16*
T18	25	1	1	0	
T19	26	4	0	4	3.70*
T19	27	9	0	9	3.72*
T20	28	11	11	0	4.19*
T21	28	3	0	3	
V2	29	1	0	1	3.45*
T22	29	1	1	0	3.59*
T22	30	37	36	1	4.68, 4.45, 4.44, 4.35, 4.32, 4.20, 4.19, 4.16*, 4.09, 4.03, 4.01, 3.96, 3.93, 3.78, 3.75, 3.68, 3.65, 3.63, 3.60, 3.60, 3.57, 3.52, 3.52, 3.49, 3.46, 3.44, 3.38, 3.28 3.15, 3.07, 2.94, 2.63
T23	31	2	0	2	
T24	32	5	5	0	4.09*
T25	33	1	0	1	4.16*
V3	34	8	5	3	4.06*
unc.	unc.	9			

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.	*Rev.*	*Examples*	↑	↓	*Recorded weights*
		FELICITAS PVBL – / – (7)			
		(*RIC* Trebonianus 82)			
T26	35	2	2	0	3.71*
T27	36	1	1	0	3.97*
T28	37	2	0	2	3.93*
T29	38	1	1	0	4.37*
T30	39	1	1	0	3.31*
		MARTI PACIFERO – / – (3)			
		(*RIC* Trebonianus 85)			
T31	40	2	2	0	3.53*
T32	41	1	0	1	3.32*
		ADVENTVS AVG – / – (2)			
		(*RIC* Trebonianus 79)			
T33	42	1	1	0	
T34	43	1	1	0	
		AEQVITAS AVG – / – (2)			
		(*RIC* Trebonianus 80)			
┌T35	44	1	0	1	3.43*
└T35	45	1	1	0	2.48
		HYBRID OF UNMARKED AND SIXTH OFFICINAE			
		FELICITAS PVBL – / VI (12)			
		(*RIC* —)			
↑ T7	46	12	12	0	3.80*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.	*Rev.*	*Examples*	↑	↓	*Recorded weights*

SECOND OFFICINA

IVNO MARTIALIS ••/•• (2)
(*RIC* Trebonianus 83)

T36	47	2	2	0	3.68*

ADVENTVS AVG ••/•• (5)
(*RIC* Trebonianus 79)

T36	48	1	0	1	
T37	48	1	0	1	
T38	48	3	0	3	3.40*

AEQVITAS AVG ••/•• (14)
(*RIC* Trebonianus 80)

T37	49	5	0	5	4.53, 3.82, 3.44*, 3.19, 3.14
T39	50	7	2	5	4.60, 4.46, 3.90*, 3.68, 3.43
T40	51	1	1	0	3.25*
T41	52	1	1	0	3.34*

FELICITAS PVBL ••/•• (26)
(*RIC* Trebonianus 82, Volusian 217)

T38	53	4	4	0	
T37	53	8	8	0	3.53*
T42	53	1	0	1	
T43	53	2	2	0	
unc.	53	2	2	0	
T43	54	8	8	0	3.46*
T44	55	1	0	1	3.95*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.	*Rev.*	*Examples*	↑	↓	*Recorded weights*
		MARTI PACIFERO ••/•• (1) (*RIC* Trebonianus 85)			
T44	56	1	1	0	4.57*
		MARTEM PROPVGNATOREM ••/•• (32) (*RIC* —)			
T42	57	1	1	0	
T38	57	31	31	0	4.59, 4.52, 4.44*, 4.32, 4.16, 3.90, 3.90, 3.85, 3.71, 3.66, 3.59, 3.57, 3.55, 3.50, 3.49, 3.48 3.40, 3.26, 3.13, 3.05, 3.04, 3.01, 2.89, 2.81, 2.78
		VICTORIA AVG ••/•• (1) (*RIC* Trebonianus 93)			
T42	58	1	0	1	4.86*

THIRD OFFICINA

		IVNO MARTIALIS •••/••• (1) (*RIC* Trebonianus 83)			
T45	59	1	1	0	3.80*
		FELICITAS PVBL •••/••• (1) (*RIC* —)			
V4	60	1	1	0	4.46*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.	*Rev.*	*Examples*	↑	↓	*Recorded weights*
		FOURTH OFFICINA (?)			
		PAX AVGVS ••(•• ?)/•••• (1)			
		(*RIC* Trebonianus 86)			
T46	61	1	0	1	3.66*

The Antioch hoard consists entirely of coins of Trebonianus Gallus and Volusian in extremely fine to fleur-de-coin condition. No other hoard displays such intimate die linkage,[2] and were it not for the relatively small size of the deposit (at least as far as we can know it) it would be tempting to regard it as an official chest or as a moneyer's stock.[3] More likely, however, it should be characterized as an emergency

[2] Largely because of the sheer mass of the coinage, few imperial hoards or issues have been subjected to die study, but it is clear that die linkage is very infrequent. S. K. Eddy found only two pairs of coins struck from the same obverse dies among 661 antoniniani of Gordian III and a single obverse die link among 465 antoniniani of Philip I and his family in the Smyrna Hoard (*The Minting of Antoniniani A.D. 238–249 and the Smyrna Hoard*, NNM 156 [New York, 1967], p. 62); and H. Mattingly found only about five die links per hundred coins of Philip I in the Dorchester Hoard ("The Great Dorchester Hoard of 1936," *NC*, 5th ser., vol. 19 [1939], pp. 38–39). He regarded this as a higher percentage than was likely to be encountered in a body of coins pulled from general circulation, and was led to suppose that the hoard may have been a private bank which received its coins directly from the mint.

[3] The lot described here (which is briefly noted in *Coin Hoards*, 2 [1976], no. 254) certainly does not constitute a complete hoard. The vendor's information that it was only part of a somewhat larger find is confirmed by the recent appearance in trade of an unusually large number of eastern antoniniani of Trebonianus and Volusian, which hitherto have been scarce to rare. But despite its unusual composition there is good reason to believe that the lot under discussion does not seriously misrepresent the composition of the whole: a lot of 82 coins which has been studied in England resembles the present one even in small details (for example, it contains 67 coins with rev. MARTEM PROPVGNATOREM) and adds little to the record of dies given here. Given the frequency of die linkage it is certain that the hoard contained no later material, and such earlier coins as may have been removed would not substantially affect the arguments advanced here.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

deposit—a sum of money acquired directly from the mint and, in the face of some danger, put away immediately for safekeeping.

A range of possible dates for its deposit and loss is, of course, provided by the reign of Trebonianus Gallus and Volusian, ca. June 251 to August 253.[4] But greater precision is possible, since it is generally agreed that these "eastern" antoniniəni, which were struck in six officinae distinguished by the use of pellets and Roman numerals and a seventh with no mark, were struck at the same mint (or mints) which produced Greek tetradrachms that also emanated from seven officinae, six marked and one unmarked. The sequence of the undated antoniniani can therefore be established by analogy with the dated tetradrachms.

The tetradrachms of Trebonianus break into two distinct stylistic groups which might be termed "fine" and "gross." The fine style, which was inherited from Trajan Decius, is characterized by hard, firm features (PLATE 17, 1–2). The emperor's neck is narrow, his head is somewhat rounded, and his wreath ties are well articulated; the mouth is small and often curves downward. This style appears on the first two issues of Trebonianus, which have the reverse officina mark between the eagle's legs and S C in exergue; these are dated ΔHMAPX EΞOYCIAC (251) (PLATE 17, 3) and ΔHMAPX EΞOYCIAC YΠATO B (252) (PLATE 17, 4).

The gross style appears only on the last issue of Trebonianus, on which the officina mark is moved to the exergue and S C placed beneath the eagle's wings (PLATE 17, 5–6). The imperial bust is square, with the back and top of the head flattened; the jaw is fuller, the nose and eyes are more prominent. The wreath ties are usually formed with single strokes and end in small pellets. This issue, like the second, is dated ΔHMAPX EΞOYCIAC YΠATO B, and may indeed have begun in 252; but since Trebonianus never held a third consulship the legend probably carried over into 253.[5]

[4] For the dates see A. Stein, "Zur Chronologie der römischen Kaiser von Decius bis Diocletian," *Archiv für Papyrusforschung*, 7 (1924), pp. 30–51.

[5] Bellinger placed the change of style at the beginning of 253, and this accords well with the distribution of Trebonianus's second consulship tetradrachms at Dura, where there were 81 coins of fine style and 70 of gross style. A. R. Bellinger, "The Numismatic Evidence from Dura," *Berytus*, 8 (1943), pp. 61–71.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Trebonianus's antoniniani display the same stylistic dichotomy. A scarce group of coins has the fine style, which again is taken over from the coinage of Trajan Decius. Its basic elements are identical to those already noted on the tetradrachms. On the antoniniani the emperor is portrayed from behind, wearing a cuirass but without paludamentum (PLATE 17, 7–8). A more common series of gross style shows the emperor, still from behind, but adds the paludamentum (PLATES 10–16).

The coins of Volusian present a slightly more complicated picture. Only two varieties of tetradrachm were struck in his name: both are of fine style. Like the first two issues of Trebonianus, both issues of Volusian have the officina mark between the eagle's legs and S C in exergue; they are dated ΔHMAPX EΞOYCIAC (251) (PLATE 18, 9) and ΔHMAPX EΞOYCIAC YΠATO B (PLATE 18, 10). The latter date almost certainly refers not to Volusian's second consulship in 253 but to his father's in 252. Volusian did not participate in the final tetradrachm issue, with S C beneath eagle's wings, and hence there are no Volusianic tetradrachms of gross style.

Volusian's antoniniani break into two groups which, to judge from their frequency in hoards, were of approximately equal size. One is of fine style and bears the obverse legend IMP C V AF GAL VEND VOLUSIANVS (or VOLVSIANO) AVG, or a minor variant thereof (PLATE 18, 11); the other has the gross style—except for the absence of a beard the portrait is almost indistinguishable from that of Trebonianus—and a shorter obverse legend, IMP C C VIB VOLVSIANVS AVG. Both die links and identity of style show that the shorter legend group was contemporary with the gross style issue of Trebonianus, which in turn was struck alongside the final issue of tetradrachms in later 252 and 253.

The chronology of both the antoniniani and the tetradrachms is therefore clear; their attribution has not always been. Alfred Bellinger, who first made the distinction between the fine and gross styles, was aware of its chronological implications; but he also took the change of style to indicate a change of mint.[6] The gross style tetradrachms

[6] Bellinger, pp. 61–62.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

uniformly portray a scrawny eagle with wings upraised to accommodate placement of S C in the field rather than in the exergue. This group of tetradrachms provided the prototype for the tetradrachms of the usurper Uranius Antoninus, which were certainly struck at Emisa. Bellinger concluded that in 253, under pressure from Shapur I, the mint was moved from Antioch to Emisa: the fine style antoniniani and traditional tetradrachms, which grew directly out of the coinage of Decius, were the products of Antioch, while the gross style coins of both denominations were struck at Emisa.

Bellinger's reattribution was ignored by most numismatists but gained considerable currency among historians for reasons which will emerge below. It was Baldus who finally pointed out that the gross style is duplicated on some of the signed bronze coinage of Antioch (PLATE 18, 12), and is already hinted at on some of the earlier tetradrachms whose attribution to Antioch is not in dispute.[7]

The provenance of the present hoard sustains Baldus's attribution of the gross style to the mint of Antioch: even if the coins had travelled only from Emisa (or any other mint) to Antioch, we should expect some intrusion of coins from other mints as well as a somewhat less intimate die linkage. The Antioch hoard contains no antoniniani of fine style, but their absence is not significant for attribution since the hoard was deposited immediately after its coins left the mint; the presence of the gross style establishes a terminus post quem of ca. early 253 for the deposit and loss of the hoard.

The output of the Antioch mint under Trebonianus and Volusian may be diagrammed as follows:

[7] H. R. Baldus, *Uranius Antoninus. Münzprägung und Geschichte*, Antiquitas, 3rd ser., vol. 11 (Bonn, 1971), p. 42. Baldus insists, needlessly it seems to me, that the gross style antoniniani antedate their tetradrachm counterparts; he points to a roughening of style on tetradrachms of Trebonianus's second consulship with S C in exergue. Comparison of the two pieces he cites (on p. 210, n. 186) fails to convince. The stylistic break between the two YΠΑΤΟ B types is sharp and complete.

[8] A. R. Bellinger, *The Coins*, Excavations at Dura-Europus. Final Report, 6 (New Haven, 1949), pp. 57–59, nos. 1261–1314.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Table 1

The Antioch Mint, 251–53

Issue	*Date*	*Tetradrachms*		*Antoniniani*	
		Trebonianus	Volusian	Trebonianus	Volusian
1.	251	ΔHMAPX EΞOYCIAC Fine style Off. mark between eagle's legs; S C in ex.	ΔHMAPX EΞOYCIAC Fine style Off. mark between eagle's legs; S C in ex.	No date Fine style	No date Fine style Long legend
2.	252	ΔHMAPX EΞOYCIAC YΠATO B Fine style Off. mark between eagle's legs; S C in ex.	ΔHMAPX EΞOYCIAC YΠATO B Fine style Off. mark between eagle's legs; S C in ex.	No date Fine style	No date Fine style Long legend
3.	252–53	ΔHMAPX EΞOYCIAC YΠATO B Gross style Off. mark in ex.; S C beneath eagle's wings.	Nil	No date Gross style	No date Gross style Short legend

Original from UNIVERSITY OF MICHIGAN

The pattern of coining revealed by this arrangement is remarkable, for the predominance of the late, gross style coins in the excavations at Dura shows that the output of antoniniani at Antioch increased vastly during the last year of the reign of Trebonianus and Volusian:

	Trebonianus	*Volusian*
Early style, 251–52	7	3
Late style (252?)–253	111	8

The scale of this increase is evident when the total of Antiochene antoniniani from their reign is compared with the totals from the reign of Gordian III onward in the excavations at Dura and Antioch:

	Dura	*Antioch*
Gordian III	86	3
Philip and family	12	1
Decius and family	1 (or 2)	0
Gallus and Volusian, 251–52	10	0
Gallus and Volusian, (252?)– 253	119	11

In sum, after a period of relative quiescence following the reign of Gordian III, the mint burst into activity in 253 (or perhaps late 252); while tetradrachm production was sustained at previous levels, the output of antoniniani increased at least tenfold. It was during this period of frenetic activity that the Antioch hoard was assembled and deposited.

Three factors indicate that this sudden expansion of the Antioch mint is to be associated with the military difficulties which beset the eastern empire during the 250s: the pattern of Roman silver coinage in the East, the disruption of the mint, and, to a lesser extent, its choice of types.

First, the Romans never encouraged, much less enforced, the circulation of denarii or antoniniani in Syria. The local medium of exchange

[9] D. B. Waage, *Antioch-on-the-Orontes*, vol. 4, pt. 2: *Greek, Roman, Byzantine and Crusaders' Coins* (Princeton, 1952), pp. 100–1.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

had always been the tetradrachm, and it continued to be struck regularly and in large quantities through the reign of Gallus and Volusian. It is true that certain periods saw brief (and occasionally substantial) denarius or antoninianus issues which can be attributed with varying degrees of certainty to Antioch; but all those issues coincide with military activity in the province (Pescennius Niger, Gordian III) or imperial accessions (Vespasian or Macrinus), which themselves normally involved payments to the armies.[10] Moreover, as Callu has observed, denarii and antoniniani had insubstantial impact on the currency of Antioch; on the other hand at Dura, a garrison town, both denarii and antoniniani were found in considerable numbers.[11] Up to the time of Trebonianus and Volusian, virtually every Antiochene denarius or antoninianus coinage can be connected with military events, and it is reasonable to suppose that the same is true of the large issue of gross style antoniniani which began ca. early 253.

Second, the haste with which this issue was produced is evident from the disruption of the mint's normal practices. In the fourth consulship of Philip I the mint of Antioch had begun to mark its tetradrachm obverse dies with a varying number of pellets to indicate officina of origin; at first there were four workshops in operation. Philip's system was continued by Trajan Decius, who increased the number of officinae from four to eight and extended the practice of marking obverse dies to antoniniani. There is slim evidence that at the very end of Decius's reign officina marking was extended to reverse dies as well.[12]

Under Trebonianus and Volusian the number of officinae in operation was reduced from eight to seven,[13] and the marking of both obverse

[10] The attributions to Antioch of some issues which are identifiably eastern should be viewed with some caution, since they rest on the proposition that Antioch, as the East's most prosperous city, was likeliest to be its major mint. For Vespasian and Macrinus there is explicit literary testimony locating a mint in the city (Tac. *Hist.* 2.82, *SHA Diadumenian* 2.6) and since Antioch was the capital of Pescennius Niger there can be little doubt that the bulk of his coinage was produced there.

[11] J.-P. Callu, *La politique monétaire des empereurs romains de 214 à 238*, Bibliothèque des écoles françaises d'Athènes et de Rome, 214 (Paris, 1969), p. 166.

[12] Bellinger, *Coins*, p. 124, no. 531. Decius's eight officinae included seven marked, one unmarked.

[13] P. LeGentilhomme "La trouvaille de Nanterre," *RN*, 5th ser., vol. 9 (1946), p. 67 and K. Pink, "Der Aufbau der römischen Münzprägung in der Kaiserzeit,"

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

and reverse dies became standard practice. On the tetradrachms the numbers always correspond, indicating that transfer of dies among officinae was scrupulously avoided. The antoniniani present quite a different picture: mismatching of obverse and reverse dies is extremely common. A glance at the notes of *RIC* will convey some idea of the chaos which prevailed at the mint. There are even more serious signs of disruption: frequent and apparently meaningless variants in legend,[14] blunders in spelling,[15] even the mismatching of legend and type.[16]

Thus the Antiochene antoniniani of Trebonianus and Volusian stand in sharp contrast to the other products of the mint, which had been rigidly organized and was certainly capable of producing vast quantities of coin. The size of the final, gross-style issue of antoniniani and the haste with which it was produced suggest a sudden, pressing need for money such as would have been occasioned by the arrival or mobilization of new troops in the province.

NZ 69 (1936), p. 14 read IV and IIV on the antoniniani of Gallus and Volusian as 4 and 3 respectively, perhaps because there was no mark for the fifth officina. But both the third and the fourth officinae marked their dies with pellets, not numerals; and employment of S and Z on the tetradrachms alongside IV (= VI) and IIV (= VII) shows that there were indeed seven officinae in operation.

[14] The variations in spelling VBERTAS / VBERITAS and SAECVLVM / SAECVLLVM seem to be without significance. Bellinger (*Coins*, p. 138) seems to suggest that fine-style antoniniani have the legend SAECVLLVM, the gross-style antoniniani SAECVLVM, but this is not consistently true.

[15] Aside from the two minor variants discussed in the preceding note, the hoards show that whenever two legends accompany the same type one is dominant and that the other should be dismissed as an accidental variant: see Table 2. AEQVITAS AVGG is a blunder for AEQVITAS AVG, FELICITAS AVG for FELICITAS PVBL, PAX AVGVS S C for PAX AVGVS. Long ago Pink suggested that the rev. PAX AVGVS S C was produced by an engraver who was copying the legend from a Roman bronze (pp. 22–23).

Four dies in the present hoard have PRORVGNATOREM for PROPVGNATOREM (n. 1 above); in addition Mattingly notes PAX AVGAVG, PAX AVGVG and VDERITAS AVG for Trebonianus and PAX AVGAS for Volusian (*RIC*, vol. 4, pt. 3, nos. 86n., 92n., 231 (c)n.); AEQVTAS AVG appeared in the Gibraltar hoard (cited below, n. 17); and the ANS has a coin of Trebonianus with IVCTORIA AVG (PLATE 18, 13).

[16] Bellinger, *Coins*, no. 1284 with FELICITAS PVBL, Juno seated l.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

This view is confirmed by the MARTEM PROPVGNATOREM type. Its predominance, which is peculiar to this hoard (see Table 2)[17] may result from the method of distributing coins at the mint rather than from its actual dominance in the typology of Antioch. But the very issue of the type is significant. In the coinage of Trebonianus and Volusian the type appears *only* in the last issue at Antioch; what is more, Mars is invoked not in his usual aggressive aspect (as *debellator*, *pacifer*, *ultor*, or *victor*) but instead as *propugnator*: literally, a protector or defender of a place.

Against what was Mars to defend Syria? The answer is bound up with one of the knottiest historical problems of the third century. The most important piece of documentary evidence bearing on the period is the so-called *Res Gestae Divi Saporis*, a trilingual inscription discovered in 1936.[18] In it the Sasanian king Shapur I, recounting his career, explicitly mentions two invasions of Syria, during the first of which he took and pillaged Antioch. In recording two invasions Shapur

[17] In Table 2 the Dura figures include single finds as well as hoard coins. The Dorchester hoard is cited above, n. 2. The remaining hoards are as follows: A. Spijkerman, "A Hoard of Syrian Tetradrachms and Eastern Antoniniani from Capharnaum," *SBF* 9 (1958–59), pp. 282–327; J. Petrović, "Rimsko blago iz Smedereva," *Starinar*, 6 (1931), pp. 32–77; H. D. Gallwey, "A Hoard of Third-Century Antoniniani from Southern Spain," *NC*, 7th ser., vol. 2 (1962), pp. 335–406; R. A. G. Carson, "The Hamâ Hoard and the Eastern Mints of Valerian and Gallienus," *Berytus*, 17 (1968), pp. 123–42; R. Göbl, *Der römische Münzschatzfund von Apetlon*, Wissenschaftliche Arbeiten aus dem Burgenland, 5 (Eisenstadt, 1954); "Römischer Münzschatzfund Tulln 1966," *NZ* 83 (1969), pp. 7–57; K. J. J. Elks, "The Eastern Mints of Valerian and Gallienus: the Evidence of Two New Hoards from Western Turkey," *NC*, 7th ser., vol. 15 (1975), pp. 91–109. In the Table "0" is used to abbreviate the unmarked officina.

[18] The *Res Gestae Divi Saporis* has been published repeatedly: see the bibliography provided in G. Downey, *A History of Antioch in Syria from Seleucus to the Arab Conquest* (Princeton, 1961), p. 588, n. 4. In the discussion which follows sources which bear only tangentially on the problem have been omitted: for full summary of the evidence see most conveniently Downey, pp. 587–95; also A. Honigmann and E. Maricq, *Recherches sur les Res Gestae Divi Saporis*, Académie royale de Belgique Classe des lettres et des sciences morales et politiques, Mémoires, collection in 8°, 47 (Brussels, 1953); W. Ensslin, *Zu den Kriegen des Sassaniden Schapur I*, Sitzungsberichte der bayerischen Akademie der Wissenschaften, phil-hist. Klasse 5 (Munich 1947).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Representation of Antiochene Antoniniani of Trebonianus Gallus and Volusian in Hoards

RIC	*Type*	*Officinae*	*Capharnaum*	*Smederevo*	*Gibraltar*	*Hama*	*Dura*	*Dorchester*	*Apetlon*	*Tulln*	*W. Turkey (A)*	*W. Turkey (B)*	*Total*	*Antioch*
79	ADVENTVS AVG	all	1	3	14	4	9	0	2	6	0	0	39	7
80	AEQVITAS AVG	all	0	9	28	9	20	2	0	8	8	0	84	16
81	AEQVITAS AVGG	0	0	0	1	0	0	0	0	0	0	0	1	0
—	FELICITAS AVG	(... / —)	0	0	2	0	0	0	0	0	0	0	2	0
82	FELICITAS PVBL	all	0	0	33	11	30	2	1	6	6	0	89	46
83	IVNO MARTIALIS	all	5	10	26	14	24	5	1	7	4	2	98	3
84	MARTEM PROPVGNATOREM	0,2	3	0	12	11	5	1	0	1	2	3	38	372
85	MARTI PACIFERO	all	0	3	15	0	4	3	1	4	2	0	32	4
86	PAX AVGVS	all	1	10	10	1	8	1	1	8	2	0	42	1
87	PAX AVGVS S C	0	0	0	0	0	0	1	0	0	0	0	1	0
88	PVDICITIA AVG	0	0	0	1	0	0	0	0	0	0	0	1	0
89	ROMAE AETERNAE AVG	all	0	8	7	4	5	4	0	1	0	0	29	0
90	SAECVLVM NOVVM	1–4, 6–7	0	7	4	0	1	0	0	2	0	0	14	0
91	SAECVLLVM NOVVM	1–4, 6–7	1	0	8	5	2	1	0	2	2	0	21	0
92	VBERITAS AVG	all	0	20	17	5	3	3	3	14	7	0	72	0
93	VICTORIA AVG (Vict. l.)	all	0	5	11	2	6	0	0	2	2	0	28	1
94	VICTORIA AVG (Vict. r. on globe)	0, 4, 6	0	1	1	0	0	0	0	3	0	0	5	0
95	VICTORIA AVG (Vict. r.)	0	0	0	0	0	0	1	0	1	0	0	2	0
96	VIRTVS AVGG	0	0	0	1	0	0	0	0	0	0	0	1	0
			11	76	191	66	117	24	9	65	35	5	599	450

Original from UNIVERSITY OF MICHIGAN

is supported only by Syncellus (715.16–716.3), who speaks of two captures of Antioch, one before and one after the capture of Valerian; and by the eleventh-century *Chronicle of Seert*.[19]

The date of the second invasion is fairly secure because of its association with the death of Valerian; but the date of the first is uncertain. Two literary sources would seem to solve the problem. The most valuable is the nearly contemporary *Oraculae Sibylllinae*, ostensibly prophetic but in fact written with knowledge of the events described.[20] The capture and pillage of Antioch are reported in 13.119–36; since this passage is followed by an account of the revolt, victory, and death of Aemilian, it must refer to events of early to mid-253. This version is confirmed by Zosimus 1.27 (26.21–27.12), where a capture of Antioch is also placed in the reign of Trebonianus.

Confidence in a date of 253 for the capture of Antioch has, however, been undermined by the silence of three other writers—Libanius, Ammianus Marcellinus, and Malalas; all of them lived at Antioch and their accounts would be expected to have particular value. Unfortunately none of these authors records more than one capture of the city, and none of their accounts need refer to the events placed by the *Oraculae Sibyllinae* and Zosimus in 253. For example, Libanius (*Or.* 24.38) tells of a Persian capture of the city while the people were in the theatre; a second passage (*Or.* 60.2–3) reports that Shapur took and burned the city and went on to Daphne with the intention of destroying it as well. Neither reference is dated. Ammianus's references are oblique, since the portion of his history dealing with this period has been lost. One passage (23.5.3) echoes Libanius's report of the surprise of the city while the populace was in the theatre; the event is vaguely placed *Gallieni temporibus*. Elsewhere (20.11.11) he mentions the reuse, in A.D. 360, of a great battering ram the Persians had once (*quondam*) left behind at Carrhae after using it against Antioch. Malalas is even less useful: he mentions only a single capture of the city, which he dates to the year 314 of the Antiochene era—that is A.D. 265/66—in a passage ostensibly describing events of the reign of Valerian (296.9). The date is obviously wrong and, although probably corrupt, no emendation

[19] *Histoire nestorienne inédit* (*Chronique de Seert*), ed. A. Scher, *PO* 4.221.

[20] *RE* 2A, s.v. "Sibyllinische Orakel," cols. 2158–62.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

so far proposed is of convincing palaeographic probability. If, however, the Sampsigeramus of 296.13–14 is to be identified with the usurper Uranius Antoninus, the events to which Malalas refers might be placed in 253/54.[21]

Rostovtseff was almost alone in thinking that the literary evidence pointed to 253 for Shapur's first invasion of Syria and the fall of Antioch. Most subsequent scholars have preferred a later date at least for the capture of the city, on the ground that the extended itinerary reported in the *Res Gestae Divi Saporis* would not have put Shapur before Antioch until 256.[22] In support of the later date archaeological evidence has been adduced: not from Antioch itself, where stratification has been disturbed, but from Dura, which certainly fell in 256.[23] It is tempting to view the capture of both cities as part of the same campaign.

Before attempting to place the Antioch Hoard in this confused historical context it is necessary to review such other numismatic evidence as has been brought to bear on the problem. For a time the move of the Antioch mint to Emisa in 253 postulated by Bellinger seemed to confirm an early date for the invasion of Syria; but for the reasons advanced above his view can no longer be sustained.

A defaced Antiochene tetradrachm was offered by F. M. Heichelheim[24] in support of an early date for the fall of Antioch and Sasanian control of the city; it is no more substantial evidence. The coin was identified by Heichelheim as part of Trebonianus's last issue from the mint; this was a surprising lapse, since it is clear from his own plate that the coin

[21] The identification of Sampsigeramus with Uranius Antoninus is defended by Baldus, pp. 246–50; his view is accepted by A. Chastagnol, *Syria*, 51 (1974), pp. 208–14, but questioned by H. Castritius, *Gnomon*, 46 (1974), pp. 589–95.

[22] This date is preferred by Downey, p. 594; Honigmann and Maricq, p. 142; T. Pekáry, "Bemerkungen zur Chronologie des Jahrzehnts 250–260 n. Chr.," *Historia*, 11 (1962), p. 128; G. Walser and T. Pekáry, *Die Krise des römischen Reiches. Bericht über die Forschungen zur Geschichte des 3. Jahrhunderts (193–284 n. Chr.) von 1939–1959* (Berlin, 1962), pp. 24–33, with full bibliography.

[23] On the date of Dura's fall Bellinger, *Coins*, p. 209; and C. H. Kraeling, *The Synagogue*, Excavations at Dura-Europus. Final Report, vol. 8. no. 1 (New Haven, 1956), pp. 336 ff.

[24] F. M. Heichelheim, "Numismatic Comments IV. A Sassanian Issue in Antioch on the Orontes at the Time of Trebonianus Gallus," *Hesperia*, 16 (1947), pp. 277–78. The coin has since been published in *SNGFitzwilliam* 8, no. 5918.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

was struck not by Trebonianus but by Trajan Decius. Although the punch marks on the coin are probably ancient, there is nothing specifically Sasanian about them, and hence nothing to support the view that tetradrachms were intentionally defaced during the Persian occupation of Antioch. The Sasanian overstrikes of Roman provincial coins which he expected to turn up in collections have so far failed to appear.

A weightier argument for some kind of disturbance at Antioch in 253 was offered by Andreas Alföldi.[25] In his discussion of the chronology of the Antiochene issues of Valerian and Gallienus occasioned by the discovery of the Hamâ hoard, Alföldi identified as the first issue that which included the dated type *RIC* 207, with rev. legend P M TR P II COS P P. He argued that this combination of titles was incorrect, since for most of his second tribunician year Valerian was also COS II, but that in any case the year referred to must be 254. On this analysis the mint of Antioch must have been closed from the death of Trebonianus and Volusian in August 253 until 1 January 254 at the earliest.

Two points must be made, one trifling. In fact the formula P M TR P II COS P P might be precisely correct from 10 December 253 to the beginning of 254 when Valerian actually entered his second consulship; therafter it could still have been employed with the tribunician but without the consular iteration. Alföldi himself has shown that documents of this decade, both numismatic and epigraphic, are extremely inconsistent in their use of titulature.[26]

More important is the fact that this issue, which may have begun as early as 10 December 253, is not the first but the second from the Antioch mint:[27] there exists an earlier issue in the name of Valerian alone which is represented in the hoards in substantial numbers. Even if, as Alföldi supposed, the second issue including the dated coin with P M TR P II COS P P did not begin until 254, we are still left with a sizable emission which has to be placed in 253. Both stylistically[28] and

[25] A. Alföldi, "Die Hauptereignisse der Jahre 253–261 n. Chr. im Spiegel der Münzprägung," *Berytus*, 4 (1937), p. 42.

[26] A. Alföldi, "The Reckoning of the Regnal Years and Victories of Valerian and Gallienus," *JRS* 30 (1940), pp. 1–10.

[27] Carson, pp. 125–26, 132–33. Carson places even this issue in 254.

[28] See PLATE 18, 14–16 for coins of Valerian's first issue at Antioch. Note especially the rear view, the form of Valerian's drapery, the rendering of the radiate

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

in the form of its obverse legend (IMP C P LIC VALERIANVS P F AVG) it shows close affinities with the last issue of Trebonianus and Volusian; if there was a hiatus in production in later 253, it was of brief duration and hardly sufficient to be cited in support of the city's fall in that year.

The Antioch hoard cannot tell us when the city fell, but it does constitute the first piece of solid numismatic evidence supporting the explicit statements of the *Oraculae Sibyllinae* and Zosimus that Syria was invaded as early as 253. The character of the hoard itself, with its fresh and closely die-linked coins, indicates a sudden accumulation of money put away in the face of some immediate danger; that this danger was military in character is suggested by the massive increase in antoninianus output at Antioch. For if the invasion of Syria is postponed even into the reign of Valerian and Gallienus the sudden production of new money as well as the disruption of the normal operations at the Antioch mint during the last months of Trebonianus and Volusian become quite inexplicable. In sum, the Antioch hoard indicates that whenever the city fell, Shapur's invasion of Syria began as early as 253.

We may turn from the general historical and numismatic problems raised by the deposit and loss of the Antioch hoard to brief consideration of its idiosyncratic internal composition. Both the preponderance of a single type in it and the heavy bias toward the products of the unmarked officina illuminate both the organization of the mint and the means by which its products were introduced into circulation.

The pattern of die linkage in the unmarked officina may suggest that types were produced cyclically, or one at a time. In this workshop die transfer among the coins with rev. MARTEM PROPVGNATOREM is very common; similarly the two coins with rev. AEQVITAS AVG share an obverse die. With the lone exception of obv. die T7, anomalously combined with a FELICITAS PVBL reverse from the sixth officina, there is no instance of an obverse die shared by reverses of different types. It appears that all the MARTEM PROPVGNATOREM coins were struck at once, in succession.

---

crown (and the double wreath ties terminating in single pellets), as well as the large staring eye and highly arched eyebrows. All these elements, identical to those on the last issue of Trebonianus and Volusian, are softened on Valerian's later issues.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

A somewhat different picture emerges from the second officina. Here three dies are shared by three different reverse types, while two obverses are common to two. This kind of linkage is not completely inconsistent with cyclical production, but does demand an assumption of relatively long die life. We need not rule out the possibility that different officinae had different systems of production.

In both officinae the MARTEM PROPVGNATOREM type is most numerous. It constitutes over 90 percent of the coins from the unmarked officina; in the second officina it is not predominant but it remains the single most abundant type. The natural inference is that this type was the one being produced at the moment the coins left the mint: when coins were paid out the bulk of them would bear the type currently in production, together with a few strays of other types. This is confirmed by the much higher ratio of coins to obverse dies for the MARTEM PROPVGNATOREM type as against others in the hoard:[29]

UNMARKED OFFICINA

	Coins	*Obv. Dies*	*Ratio of Coins to Dies*
MARTEM PROPVGNATOREM	331	28	11.8:1
AEQVITAS AVG	2	1	2:1
MARTI PACIFERO	3	2	1.5:1
FELICITAS PVBL	7	5	1.4:1
ADVENTVS AVG	2	2	1:1

SECOND OFFICINA

	Coins	*Obv. Dies*	*Ratio of Coins to Dies*
MARTEM PROPVGNATOREM	32	2	16:1
FELICITAS PVBL	24	6	4:1
AEQVITAS AVG	14	4	3.5:1
IVNO MARTIALIS	2	1	2:1
ADVENTVS AVG	5	3	1.7:1
MARTI PACIFERO	1	1	1:1
VICTORIA AVG	1	1	1:1

[29] Illegible coins are excluded and die transfer among types is ignored.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

If types were produced cyclically (and this cannot be regarded as proven), it is equally clear that coins could be struck for two imperial figures at the same time in the same officina: two of the four obverse dies of Volusian represented in the hoard are paired with reverse dies shared by Trebonianus. It is tempting to suppose that each ruler was assigned an anvil (or set of anvils), and that reverse dies were drawn at random from a "die box" at the beginning of each work period and paired with whatever obverse dies happened to be in use. The frequent combination of reverse dies with two or more obverses supports the die box theory: on the generally-accepted view reverse dies deteriorated more quickly than obverses, and it is highly unlikely that a substantial number of reverse dies would have survived continuous use with two, three or more obverses.

The predominance of the products of only two of the seven known officinae is without parallel. It is worth observing, in connection with the possibility of cyclical production and the fact that only the MARTEM PROPVGNATOREM type was being struck when the hoard was assembled, that the type is known only from the unmarked and second officinae: possibly the officinae themselves functioned intermittently, and the composition of the hoard was dictated by the fact that only these two were in operation at the moment of its assembly.

Perhaps a better alternative, since almost all Antiochene antoniniani were produced in all officinae (Table 2), is to envision the skewing of the hoard as the result of bureaucratic practice. We have no actual knowledge of the inner workings of the mint; but it is reasonable to suppose that at specified intervals finished coins were removed from the workshops and turned over to the *nummularii* for disbursement. After counting there would be no reason to keep the products of the various officinae segregated from one another; on the other hand, unless a deliberate effort was made to mingle them, coins from the same workshop would tend to remain associated with one another. Any fairly small lot of coins withdrawn from the mint would thus be likely to contain mainly the products of only one or two officinae. Extended circulation would eventually result in the more random and usually even distribution to be observed in most hoards.

Finally the difficult question of volume of coinage must be addressed. In the Antioch hoard the MARTEM PROPVGNATOREM issue is re-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

presented by 363 specimens struck from 30 identifiable obverse dies. The extremely high ratio of coins to dies held out the prospect that our record of dies might be substantially complete and could provide an index to the size of the entire issue. The type's occurrence in hoards could then be compared with that of other issues for which the dies have not been counted, and an impression formed of the dimensions of Antioch's output during the reign of Trebonianus and Volusian.

Comparison of coins in the hoard with others known before its discovery yielded rather discouraging results. Of fourteen examples of the MARTEM PROPVGNATOREM type in the British Museum, Berlin, the ANS, and published sources, only three were struck from obverse dies represented in the hoard, and only five reverse die links were noted. This doubtless reflects the fact that the MARTEM PROPVGNATOREM type continued to be struck beyond the moment at which the Antioch Hoard was assembled.

Although the record of dies used to strike the type remains incomplete, the bare knowledge that the issue consumed no less than 44 obverse dies (30 in the hoard, 11 from museum and published sources, and 3 from the second lot mentioned above, n. 3) helps to correct the impression of an insubstantial minting operation which might have been formed on the basis of the type's previous rarity, and indeed the rarity of Antiochene antoniniani in general. Even at a minimal figure of 10,000 coins per obverse die, the MARTEM PROPVGNATOREM issue consisted of 440,000 antoniniani. If the hoard evidence summarized in Table 2 is any guide at all, this issue constituted only about 6 percent of the entire output of the Antioch mint in 251–53; thus a minimum output of ca. 7,000,000 antoniniani may be posited for this period, the bulk of them produced during the last year of Trebonianus's rule.

Given our imperfect record of dies and inability to estimate reliably output per die, no precision can be claimed for these computations; nor can they be seen in context since there is nothing against which to compare them until the volume of coin production at Rome can be estimated. They are offered merely to indicate the minimum level of activity at the Antioch mint during the reign of Trebonianus and Volusian.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

WESTERN KṢATRAPA AND RELATED COINS

(PLATES 19–22)

RICHARD SALOMON

The American Numismatic Society posseses an interesting collection of 218 coins of the Western Kṣatrapas (or Satrapas) of the Gujarat-Maharashtra region of western India in the early centuries of the Christian era, and of similar coins of subsequent dynasties. The Western Kṣatrapa coinage has long been of special interest to numismatists as the only regularly-dated series in the entire field of pre-Islamic Indian numismatics.

1. THE WESTERN KṢATRAPA COINS

Though somewhat obsolete, Edward Rapson's *Catalogue of the Coins of the Andhra Dynasty, the Western Kṣatrapas, the Traikūṭaka Dynasty, and the Bodhi Dynasty* (British Museum, 1908) remains beyond challenge the standard work on Western Kṣatrapa coinage. For the most part, Rapson's identifications of the Kṣatrapas and Mahākṣatrapas and readings of the coin legends still stand uncorrected. The dates attested in the British Museum collection were, of course, incomplete, but have been supplemented by various more recent publications; the results of all these works are collated in the Appendix to the present article.

It is neither surprising nor disappointing that the ANS collection presents no specimens with previously unreported dates. The known dates of Kṣatrapa coins provides a nearly complete chronology of the dynasty, and new dates are found rarely. (However, the recently discovered and very important Ranjangaon hoard has yielded some new dates; see Appendix.)

Nevertheless, the ANS collection does contain a few minor variants which have not been previously reported, for example nos. 71 and 89. Another interesting piece is no. 172, which, though obviously based

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

on the Kṣatrapa type, cannot be an actual Kṣatrapa coin; I am unable to identify this piece, not having come across such a type before.

Unless otherwise specified, all the Kṣatrapa coins described below are of the usual silver type:

Obv.: Bust of king facing r. Date, if any, behind head. On many specimens, pseudo-Greek inscription or traces of same around bust.

Rev.: Triple-arched caitya symbol with crescent above, wavy line below; to l., crescent, to r., star. Dotted border. Brāhmī legend around.

The dates of Western Kṣatrapa coins are in the Śaka era, which commences in A.D. 78.

The majority of the Kṣatrapa coins in the ANS collection come from the collection of Colonel T. Biddulph.

In transcribing the legends, I have followed Rapson's notation, using a Roman numeral to indicate the point of the clock at which the legend begins. The diameter of each coin is given in millimeters; the weight in grams. Illustrated coins are marked by an asterisk (*).

NAHAPĀNA (KṢATRAPA)

*1. Bust r. with long face, similar to Rapson 247. Greek leg. XI : [P]AN.....NΛΛ

Rev.: Arrow l., thunderbolt r., pellet between.
Kharoṣṭhī leg. XI (to l.): raña chaharatasa (na)ha...
Brāhmī leg. XI (to r.): rajño kṣaha(rātasa na)...

15 mm; 2.419 g

*2. *Obv.*: Bust r., poorly struck.
Greek leg. XI: PANNI.....
Perhaps partially restruck by Gotamīputra, as there are traces of what look like Brāhmī letters on the left edge.

Rev.: Same as 1.
Kharoṣṭhī leg. XII: ....chaharatasa nahapa (incompletely engraved).
Brāhmī leg. XII: .....ñ.....nahapānasa.

16 mm; 1.952 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*3. *Obv.*: Well-engraved bust. Large eye.
Greek leg. XI: ..ANNIωε.....
Rev.: As 1.
Kharoṣṭhī leg. XI: (ra)ña chaharatasa nahapanasa
Brāhmī leg. XII: r(ā)jño (k)ṣ.....
15 mm; 2.077 g

4. *Obv.*: Bust r.
Traces of Greek legend XI: .....Iω.....ΛAN....
Rev.: As 1.
Kharoṣṭhī legend obliterated.
Brāhmī leg. X: ...(j)ño kṣaharātasa nahapānasa.
15 mm; 2.285 g

5. *Obv.*: As 4. Greek legend illegible.
Rev.: As 1.
Kharoṣṭhī leg. XII: raño chaharatasa nahapa....
Brāhmī leg. XII: rājñ[o k]ṣa.....ha.....
15 mm; 2.328 g

6. *Obv.*: Crude bust.
Greek legend XI: RΛИИIω(Σ).....NAA
Rev.: As 1.
Kharoṣṭhī leg.: .....(chaharatasa) na(ha)panasa
Brāhmī leg.: ....ñ.....hapānasa.
15 mm; 2.092 g

COINS OF NAHAPĀNA RESTRUCK BY GOTAMĪPUTRA ŚĀTAKARṆI

*7. *Obv.*: Bust r.
Greek legend: .....AAACCIΛΛΛPΛ.....
Restruck with caitya of six arches with pellet in each arch, crescent above.
Rev.: Traces of thunderbolt, arrow, restruck with Ujjain symbol.
Kharoṣṭhī leg.: raña cha(ha)ra(tasa) nahapanasa
Brāhmī leg.: k[ṣ]aharātasa nahapānasa
16 mm; 2.152 g
The six-arched caitya with pellets is quite unusual for these coins; most have a three-arched caitya.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*8. *Obv.*: Bust r.; leg. illegible. Restruck with Ujjain symbol with crescent attached to one arm.
Rev.: Traces of thunderbolt. Restruck with caitya of three arches, no pellets, wavy line below.
Traces of original Brāhmī leg.: rājño kṣa....
Restruck Brāhmī leg. XI: ra....m[ī]pu(ta)sa s[i]r[i]sata-kaṇisa
17 mm; 2.185 g

RUDRADĀMAN I (MAHĀKṢATRAPA)

*9. *Obv.*: Traces of Greek leg.: ...CNΛCИ.....
Rev.: Standard Kṣatrapa type.
Leg. XI: r[ā]jn[o] kṣatrapasa jayadamaputrasa rājño mahākṣatra...sa.... (Rapson's Variety a).
15 mm; 1.853 g

DĀMAGHSADA I (KṢATRAPA)

*10. *Obv.*: Traces of Greek leg.: .....ΛVCNΛCVC
Rev.: Leg. V: rajño mahakṣatrapasa rudra(dama)putrasa rājño kṣatrapasa damaghsadasa
15 mm; 1.957 g

RUDRASIṂHA I (MAHĀKṢATRAPA)

*11. *Obv.*: Traces of Greek leg.: ....ИОИО I....
Date 10(5?).
Rev.: Leg. XII: rajño mahakṣatrapasa rudradamna putrasa rājño mahā(kṣatra)pasa rudras[ī]hasa (Rapson's Variety a).
15 mm; 1.732 g

12. *Obv.*: Date xx(5 or 6).
Traces of Greek leg.
Rev.: Leg. IX: rajño mah[ā]kṣatra.....(ru)...(rājño)....kṣatrapasa rudrasīhasa
14 mm; 1.806 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

RUDRASENA I (MAHĀKṢATRAPA)

*13. *Obv.*: Greek leg. .... ⅄ IIICVII
Date 1(27?).
Rev.: Leg. XII: raj(ño) mahākṣatrapa rudras[ī]haputrasa rajño mahākṣatrapasa rudrasenasa (Rapson's Variety b).
15 mm; 2.096 g

*14. *Obv.*: Date 12x.
Traces of Greek leg.
Rev.: Leg. I: rājño mahākṣatrapasa rudrasīhasa putra... r...ñ...kṣatra(pasa) (rudra?)senasa (Variety b).
14 mm; 2.084 g

15. *Obv.*: Date 1(3)x. Traces of Greek leg.
Rev.: Leg. II: rajño mahakṣatrapasa rudrasīhasa pu(tra)... (kṣatra)...(rudra)s(e)nasa (Variety a).
14 mm; 1.732 g

16. *Obv.*: Date 13(9?).
Rev.: Leg. XII: rajño maha(kṣa).....(trasa) rajño mahākṣatrapasa rudrasanasa
14 mm; 1.340 g

17. Traces of date; [1](34?).
Rev.: Leg. II: rajño mahākṣatrapasa rudrasahasa putrasa rājño mahakṣatrapasa rudrasanasa (Variety a).
15 mm; 1.930 g

18. *Obv.*: Broken, date off. Trace of Greek leg.
Rev.: Leg. II: rajño.....[t]ra..sa rudrasīhaputrasa rajño mahakṣatrapasa rudrasanasa (Variety b).
15 mm; 1.909 g

DĀMASENA (MAHĀKṢATRAPA)

*19. *Obv.*: Date 154.
Traces of Greek leg.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: Leg.: .....rudras[ī]hasa putrasa rajño mahakṣatrapasa d...
14 mm; 2.050 g

TIME OF DĀMASENA (UNINSCRIBED POTIN COINS)

20. *Obv.*: Elephant standing r. Border of dots.
Rev.: Caitya, crescent l., star r. Date below: [14]7.
13 mm; 1.884 g

*21. *Obv.*: As 20.
Rev.: As 20. Date 153.
13 mm; 1.507 g

*22. *Obv.*: As 20.
Rev.: Caitya, crescent l., star r. Wavy line below. No date.
10 mm; 1.004 g

23. *Obv.*: As 20.
Rev.: As 22. No date.
8 mm; 0.919 g

DĀMAJADAŚRĪ II (KṢATRAPA)

*24. *Obv.*: Date 1(5)4.
Traces of Greek legend.
Rev.: Leg. II: rajño mahakṣatrapasa rudrasenaputrasa rajño kṣatrapasa damajadaśriyaḥ
15 mm; 2.014 g

VĪRADĀMAN (KṢATRAPA)

25. *Obv.*: Traces of date.
Traces of Greek leg.
Rev.: Leg. II: rajño mahākṣatrapasa dāmasenasa putrasa ra(jño) (kṣa)trapasa v[ī]radāmna(ḥ)
15 mm; 2.193 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

26. *Obv.*: Date [1]5(6–9).
Trace of Greek leg.
Rev.: Leg. II: rajño mahakṣatrapasa dāmasenasa putrasa rājñaḥ kṣatrapasa v[ī]radamnaḥ
15 mm; 2.133 g

*27. *Obv.*: Date 157
Rev.: Leg. II: rajño mahakṣatrapasa dāma(sena)putrasa rajño kṣatrapasa vīradāmnaḥ
15 mm; 1.908 g

IŚVARADATTA (MAHĀKṢATRAPA)

*28. *Obv.*: Traces of date?
Rev.: Leg. III: rājño (mahā)kṣatra.....Īśvaradattasa varṣe prathame
14 mm; 2.223 g
Īśvaradatta, a usurper, dated his coins in his own regnal years. His chronological position after Vīradāman is not definite.

YAŚODĀMAN (KṢATRAPA)

*29. *Obv.*: Date 160.
Rev.: Leg. II: rajño kṣatra(pasa) dāmasenasa putrasa rājño (kṣatrapa)....
14 mm; 1.915 g

VIJAYASENA (MAHĀKṢATRAPA)

30. *Obv.*: Date 16(3?).
Pseudo-Greek leg.
Rev.: Leg. III: rajño...kṣatra...(sa) (dāma)senaputrasa rā.....(kṣa)trapasa v(i)(ja)ya(sena)sa
15 mm; 1.938 g

31. *Obv.*: Date 16(4?).
Pseudo-Greek leg.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Rev.: Leg. II: rājño...(kṣatra)...putrasa rājño mahākṣatrapasa vijayasenasa
14 mm; 1.904 g

*32. *Obv.*: Date 164.
Trace of pseudo-Greek leg.
Rev.: Leg. III: rajña mahakṣatrapasa dāmasanaputrasa rājño mahakṣatrapasa vijayasenasa
15 mm; 1.712 g

33. *Obv.*: Date 16(5?).
Rev.: (rājño) kṣa(tra).....(mase)naputrasa rajña mahakṣatrapasa vijaya....
14 mm; 2.037 g

34. *Obv.*: Date 16(5?).
Rev.: Leg. II: rajño mahakṣatrapasa (dāmase)naputra(sa) rajño (maha)kṣatrapasa v[i]jaya(se)nasa
14 mm; 1.511 g

*35. *Obv.*: Date 16(5?).
Rev.: Leg. III: rajño mahakṣatra.....(putra).....rajño.... kṣatrapasa vijayasenasa
15 mm; 1.890 g

36. *Obv.*: Date 16(5?).
Rev.: Leg. III: rajño mahakṣatrapasa dāmasenaputrasa rajño mahakṣatrapasa (vija)yasenasa
14 mm; 1.832 g

*37. *Obv.*: Date 166.
Pseudo-Greek leg.
Rev.: Leg. II: rājño mahakṣatrapasa damasanaputrasa (rājño) mahākṣa....
15 mm; 1.944 g

38. *Obv.*: Date 16(7?).
Rev.: Leg. II: rajño mahakṣatrapasa dāmasanaputrasa rājño (maha)kṣa(tra)....(vijayasa)...
15 mm; 2.000 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

39. *Obv.*: Date 16(7?).
Pseudo-Greek leg.
Rev.: Leg. III: rajño mahakṣatrapasa dāmasenaputrasa rājño (ma)....(kṣatra)....
14 mm; 1.765 g

*40. *Obv.*: Date 16(7?).
Pseudo-Greek leg.
Rev.: Leg. III: rajño mahakṣa...(putra)...(rājño mahakṣa)-trapasa vijayasenasa.
15 mm; 1.752 g. Plated.

41. *Obv.*: Date 1(6?)?
Rev.: Leg.: .....(kṣatrapasa) dāmasenaputrasa rājño mahakṣatrapasa v(i).....
14 mm; 1.894 g

*42. *Obv.*: Date 170.
Pseudo-Greek leg.
Rev.: Leg. II: rajño mahakṣatrapasa dāmasenaputrasa rājño kṣatrapasa (vi)ja(yasenasa)
15 mm; 1.930 g

43. *Obv.*: Date 1(7?)x.
Rev.: Leg. II: (rājño) mahākṣatra(pa)sa dāmasenaputrasa rajño mahakṣatrapasa vijayasena(sa)
14 mm; 2.062 g

DĀMAJADAŚRĪ III (MAHĀKṢATRAPA)

*44. *Obv.*: Date 172 (possibly 173).
Traces of pseudo-Greek leg.
Rev.: Leg. III: rājño mahakṣatra(pa)sa (damasena)putra(sa ra)jño mahakṣatrapasa (dā)majada(śri)ya(ḥ)
14 mm; 2.020 g

45. *Obv.*: Date off. Traces of pseudo-Greek leg.
Rev.: Leg. III: rajño mahakṣatra.....sa dāmajadaśriyaḥ
13 mm; 2.209 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

RUDRASENA II (MAHĀKṢATRAPA)

46. *Obv.*: Date 182 (or 183).
Traces of pseudo-Greek leg.
Rev.: Leg. I: rājño kṣatra...v[ī]radamaputrasa rajño mahakṣatrapasa rudra(s)....
0.5 mm; 1.668 g

47. *Obv.*: Date 183 (or 182).
Rev.: Leg.: .....radamaputrasa rajño mahākṣatrapasa rudra ....
14 mm; 1.396 g

*48. *Obv.*: Date 184.
Rev.: Leg. II: rājñaḥ kṣatrapasa vīradāmaputrasa rājño mahākṣatrapasa rudrasenasa
14 mm; 2.146 g

*49. *Obv.*: Date 186 (or 7).
Rev.: Leg. II: rajñaḥ kṣatrapasa vīradāmaputrasa rājño mahakṣatrapasa rudrasenasa
15 mm; 2.298 g

50. *Obv.*: Date 186 (or 7).
Rev.: Leg. (barely legible): rajño kṣatrapasa vīradāmaputrasa rajño mahakṣatra....(rudrasenasa)
14 mm; 1.935 g

*51. *Obv.*: Date 18(8?).
Rev.: Leg. I: (rā)jño kṣatrapasa vīradāmaputrasa rajño (maha)-kṣatrapasa rudra(senasa)
14 mm; 1.678 g

*52. *Obv.*: Date 188 (or 9?).
Rev.: Leg. I: rājño kṣa.....(vī)radāmaputrasa rājño mahākṣatrapasa rudrasenasa
14 mm; 1.704 g

53. *Obv.*: Date 188 (or 9).
Leg. I: rajño kṣa(tra).....(rājño) mahākṣatrapasa rudrasenasa
14 mm; 2.327 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

54. *Obv.*: Date 189 (or 8).
Traces of pseudo-Greek leg.
Rev.: Leg. I: rajñaḥ kṣatrapasa vīradāmaputrasa rājño mahākṣatrapasa rudra(se)na(sa)
14 mm; 2.456 g

*55. *Obv.*: Date 18(9?).
Rev.: Leg. I: rajñaḥ kṣatrapasa v(ī)radāmaputrasa rajño mahākṣatrapasa rudrasenasa
15 mm; 2.060 g

*56. *Obv.*: Date 190 (or 19x).
Rev.: Brockage. Partial image of obv. design.
14 mm; 2.099 g
On the basis of the date, this is identified as a coin of Rudrasena II.

*57. *Obv.*: Date 191(?).
Rev.: Leg. I: (rajñaḥ) kṣatrapasa vīradāmaputrasa rajño (mahā)kṣatrapa(sa ru).....
14 mm; 2.294 g

58. *Obv.*: Date off.
Rev.: Leg. I: rajña(ḥ) kṣatrapasa vīra....putrasa rajño mahakṣatra(pasa) rudra...(sa)
14 mm; 2.032 g

59. *Obv.*: No date.
Rev.: Leg. II: rajñaḥ kṣa(tra).....ra...(ma)putrasa rajño mahakṣatrapasa rudrasenasa
14 mm; 2.015 g

60. *Obv.*: Date off.
Rev.: Leg. : ...(ñaḥ kṣatra)pasa vīradāmaputrasa rajño (maha)-kṣatra(pasa) (rudra).....
14 mm; 2.124 g

61. *Obv.*: No date.
Rev.: Leg. I: rajñaḥ kṣatrapasa vīradāmapu(tra)..(rajño)..
14 mm; 2.079 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

62. *Obv.*: No date.
Rev.: Leg. I: rājñaḥ kṣatrapasa vīradāmaputrasa rajño mahakṣatra(pasa) rudra...
13 mm; 2.100 g

*63. *Obv.*: Date off.
Rev.: Leg. I: rajña[ḥ] kṣatra(pa)sa (vī)radamaputrasa rājño mahakṣatrapasa rudra....
15 mm; 1.912 g

VIŚVASIṂHA (KṢATRAPA)

*64. *Obv.*: Date 19x.
Rev.: Leg. I: rajño mahakṣatrapasa rudrasenaputrasa (rājño) kṣatrapasa (vi)śvas[ī]hasa
14 mm; 2.011 g

*65. *Obv.*: Date 200.
Rev.: Leg. I: (rajño ma)hakṣatrapasa rudrasanaputrasa rajña(ḥ) (kṣatrapasa vi)śva(sīhasa)
14 mm; 2.001 g

66. *Obv.*: Date off.
Rev.: Leg. II: rajño mahakṣatra.....rudra...putra.... ....(jña) kṣatrapasa viśvasīhasa
14 mm; 2.196 g

*67. *Obv.*: Date off.
Rev.: Leg. II: rajño mahakṣatrapasa rudrasenaputrasa rajñaḥ kṣatrapasa v[i]śvas[ī]hasa
13 mm; 2.012 g

68. *Obv.*: No date.
Rev.: Leg. III: rajño ma(ha)kṣatra...rudra....kṣatrapasa v[i]śvas[ī]hasa
14 mm; 1.963 g

69. *Obv.*: Date illegible.
Rev.: Leg. II: rajño (mahakṣatrapasa) rudrasenaputrasa rajñaḥ kṣatra(pa)sa v[i]śvas[ī]hasa
13 mm; 2.226 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*70. *Obv.*: No date.
Rev.: Leg.: ....(kṣatra)...(ru)drasenaputrasa rājñaḥ kṣatrapasa....[v?]....
14 mm; 1.913 g
This could also be a coin of Bhartṛdāman, but the downward projection at II looks more like the v of śva than the ṛ of tṛ.

*71. *Obv.*: Traces of date.
Rev.: Leg. III: rajño mahakṣatrapa rudrasenaputrasa rajño mahakṣatrapasa v[i]śva(sīhasa)
14 mm; 2.059 g
Note the unusual form of the legend, mahakṣatraparudrasenaputrasa instead of the usual mahakṣatrapasa rudrasenaputrasa.

BHARTṚDĀMAN (KṢATRAPA)

*72. *Obv.*: Date 203(?).
Rev.: Leg. I: rajño mahākṣatrapasa rudrasenaputrasa rajña kṣatra(pasa) bhartṛdāmnaḥ
14 mm; 2.315 g

73. *Obv.*: Date 204.
Rev.: Leg.: .....rudrasa(napu)trasa rājñaḥ kṣatrapasa (bhartṛ)....
14 mm; 1.752 g

74. *Obv.*: No date.
Rev.: Leg. III: rajño mahākṣatrapasa rudra.....(tra)...rājña ...kṣatra...sa bhartṛdāmna
14 mm; 2.255 g

75. *Obv.*: Date off.
Rev.: Leg. III: rājña...kṣatra...rudra(senaputrasa) rājñaḥ kṣatrapasa bhartṛ(dāmna)
14 mm; 2.030 g

76. *Obv.*: Date off.
Rev.: Leg. II: rājño mahākṣatrapa...rudra(sena)putrasa rājña kṣatrapasa bhartṛdāmnaḥ
14 mm; 2.048 g

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

77. *Obv.*: Date off.
Rev.: Leg. III: rājño mahakṣatrapasa rudra.....tṛdāmnaḥ
15 mm; 2.054 g
The fabric of the coin is like that which Rapson calls 'A,' of Bhartṛdāman's coins as kṣatrapa. Therefore this is probably a coin of Bhartṛdāman as kṣatrapa.

BHARṬṚDĀMAN (MAHĀKṢATRAPA)

78. *Obv.*: Date 209(?).
Rev.: Leg. III: rajño ma(ha)kṣatrapasa rudrasenapu(tra)...
(rajño) ma(ha)kṣa(tra).....tṛ...(m)na/
14 mm; 1.967 g

*79. *Obv.*: Date 21(4?).
Rev.: Leg. I: rajño ma.....pasa rudra(senaputra)....(rājño)
...kṣatrapasa bhartṛdāmna
15 mm; 2.234 g

80. *Obv.*: Date 21(4?).
Rev.: Leg.: .....rajño mahākṣatrapasa bhartṛ(dā)...
14 mm; 2.232 g

*81. *Obv.*: Date 215.
Rev.: Leg.: .....tra.....kṣatrapasa bhartṛ(da)m....
14 mm; 1.966 g

82. *Obv.*: Date xx(4?).
Rev.: Leg. XII: rajño mahakṣatrapasa rudra....sa rajño mahakṣatrapasa bhartṛd[ā]mnaḥ
15 mm; 1.952 g

83. *Obv.*: Date x(1?) (4?).
Rev.: Leg. III: rajño...kṣatra.....rudras....putrasa rajño mahakṣatrapasa bhartṛdām[n]aḥ
14 mm; 2.068 g

*84. *Obv.*: Date 21x.
Rev.: Leg. IV: rajño ma(hākṣatra).....rajño mahākṣatrapasa bhartṛdamnaḥ
14 mm; 2.157 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

85. *Obv.*: Date 2x(4?).
Rev.: Leg.: .....(kṣatra)...(sa) rudrasenaputrasa rajño (mahakṣatra)...
15 mm; 2.125 g

*86. *Obv.*: Date 2xx.
Rev.: Leg. II: rājño mahakṣatrapasa rudrasenaputra...rajño ...kṣatra...sa bhartṛdamna
14 mm; 1.905 g

87. *Obv.*: Date 2xx.
Rev.: Leg.: .....hakṣatrapasa rudrasenaputra(sa).....
14 mm; 2.372 g

88. *Obv.*: Date 2(1?)x.
Rev.: Leg. III: rajño...kṣatra...rudra...(putrasa) rajño mahakṣatrapasa bhartṛda[m]na
14 mm; 2.262 g

*89. *Obv.*: Trace of date.
Rev.: Leg. III: rajño mahakṣatrapasa rūdra...(putra)..(rajño) ...(kṣatrapa)sa bhartṛdamnaḥ
14 mm; 1.994 g
Note the unusual spelling of the name Rūdra[sena].

90. *Obv.*: No date.
Rev. IV: rajño m...kṣatrapasa rudrasanaputrasa rajño m.... kṣatra.....
14 mm; 1.674 g

91. *Obv.*: No date.
Rev.: Leg. II: (rajño ma)...(kṣatra)...rudrasenaputrasa rajño mahākṣatrapasa bhartṛ(dām)na
14 mm; 1.973 g

92. *Obv.*: No date.
Rev.: Leg. II: rajño mahakṣatra...sa (rudra).....(rajño) mahakṣatrapasa bhartṛdamna
15 mm; 2.123 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

93. *Obv.*: Date off.
Rev.: Leg. III: (rajño)...(kṣatra)...rudrasenaputrasa rajño mahakṣatra(pasa).....(tṛ).....
14 mm; 2.116 g

*94. *Obv.*: Date off.
Rev.: Leg. III: rajño mahakṣatra.....bhartṛdamna
14 mm; 2.052 g

*95. *Obv.*: No date.
Rev.: Leg. I: (rājño maha)kṣatrapasa rudrase(na pu)....(rajño)...(kṣatra)...
14 mm; 1.797 g
This seems to be a coin of Bhartṛdāman; the lettering and portraiture (especially the representation of the nose) resemble those of Bhartṛdāman's coins. The rounded caitya design seen here appears on some other coins of Bhartṛdāman (see 79, 81).

VIŚVASENA (KṢATRAPA)

*96. *Obv.*: Date 21(5?).
Rev.: Leg. I: rajño mahakṣatra...(putrasa) rajño kṣatrapasa viśvasenasa
15 mm; 2.155 g

*97. *Obv.*: Date 216(?).
Rev.: Leg. XII: ra(jño) mahakṣatrapasa bhartṛdama(put).... (pa)sa viśvasenasa
15 mm; 2.260 g

98. *Obv.*: xx(6?).
Rev.: Leg. I: rajño...kṣatra...bhartṛ(da)maputrasa rajño kṣatrapasa viśvasenasa
14 mm; 2.163 g

99. *Obv.*: Date 21(7?).
Rev.: Leg. II: rajño (ma)...(kṣatra).....(tṛ)....(maputra)sa rajño kṣatrapasa viśvasena(sa)
14 mm; 2.183 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

100. *Obv.*: Date 21(7?).
Rev.: Leg.: .....hakṣatrapasa bhartṛdamaputra(sa) (rajño).....
14 mm; 1.916 g

*101. *Obv.*: Date 2x(7?).
Rev.: Leg. II: (rajño)...(kṣatra).....tṛ....(tra)...rajño kṣatrapasa) viśvasenasa
14 mm; 2.141 g

*102. *Obv.*: Date 22(2?).
Rev.: Leg.: .....tṛdamaputrasa rajño..trapasa v... v...
14 mm; 1.785 g

103. *Obv.*: Date 222(?).
Rev.: Leg. II: rajño mahakṣatrapasa bhartṛda...(putra)..... .....(sa)
14 mm; 1.690 g

104. *Obv.*: Date 222(?).
Rev.: Leg. II: rājño kṣatrapasa bhartṛda(ma)(putra)..... ..sa
15 mm; 2.202 g

105. *Obv.*: Date 22x.
Rev.: Leg.: (rajño) mahakṣatrapasa bhartṛdamaputra(sa rajño) .....
14 mm; 2.153 g

*106. *Obv.*: No date. Traces of pseudo-Greek leg. Several shroff marks on head.
Rev.: Leg.: .....sa rajño kṣatrapasa viśvase(na)...
15 mm; 2.218 g

107. *Obv.*: No date.
Rev.: Leg.: .....putrasa rajño kṣatrapasa viśvase....
14 mm; 1.766 g

108. *Obv.*: Date off. Traces of pseudo-Greek leg.
Rev.: Leg. II: rajño mahakṣatrapasa bhartṛ(damaputrasa)... v.....sa.
15 mm; 2.185 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

109. *Obv.*: Date off. Traces of pseudo-Greek leg.
Rev.: .....bhartṛdamaputrasa rajño kṣatra.....
..
14 mm; 2.004 g

*110 *Obv.*: No date.
Rev.: Leg. II: rajño (ma)...(kṣatra).....tṛ....(putra)sa
rajño kṣatrapasa viśvasenasa
14 mm; 1.985 g

111. *Obv.*: No date.
Rev.: Leg. II: (rajño.....bh).tṛ(dām)...putrasa rajño
kṣatrapasa v...va(s)....
13 mm; 2.137 g

RUDRASIṂHA II (KṢATRAPA)

*112. *Obv.*: Date 234.
Rev.: Leg.: .....putrasa rajño kṣatra(pa)....(rudra)....
14 mm; 1.912 g

*113. *Obv.*: Traces of date.
Rev.: Leg. XII: svami jīvadamaputrasa rajña (kṣa)trapasa rudrasahasa
14 mm; 2.232 g

114. *Obv.*: Date 2xx.
Rev.: Leg. XII: svam[i] j[ī]vadāmaputrasa rajña kṣatrapasa rudrasahasa
14 mm; 2.397 g

115. *Obv.*: Traces of date; possibly 22x.
Rev.: Leg. II: svam[i] j[ī]vadamaputrasa rajña kṣatrapasa (rudrasahasa)
14 mm; 2.421 g

116. *Obv.*: Traces of date.
Rev.: Leg. XI: svama javadamapu(tra).....rudrasahasa
15 mm; 1.536 g

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

YAŚODĀMAN II (KṢATRAPA)

*117. *Obv.*: Date 2(4?)(7?).
Rev.: Leg. III: rajña kṣatrapasa rudrasahaputra(sa) (rajña kṣatra)pasa yaśodamna
14 mm; 2.124 g

118. *Obv.*: Date 2(4?)x.
Rev.: Leg. IV: rajña kṣatrapasa rudrasahaputrasa rajña kṣatrapasa yaśodamna
14 mm; 1.963 g

119. *Obv.*: Date 2(4?)x.
Rev.: Leg. II: rajña kṣatrapasa rudrasahaputrasa rajña kṣatrapasa yaśodamna
14 mm; 2.097 g

RUDRASENA III (MAHĀKṢATRAPA)

*120. *Obv.*: Date 270 (or 27x).
Rev.: Leg. X: rajña maha(kṣa).....(putra)...rajña mahakṣatrapasa svama rudrasana
14 mm; 2.142 g

121. *Obv.*: Date 270 (or 27x). Traces of Greek leg.
Rev.: Leg. X: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.036 g

122. *Obv.*: Date (2)70 or (2)7x.
Rev.: Leg. X: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatra(pasa) (svama rudra)....
14 mm; 2.110 g

123. *Obv.*: Date 2(7?)x.
Rev.: Leg.: .....[s]vama rudradāmaputrasa rajña mahakṣatrapa(sa) [s]va.....
14 mm; 1.933 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

124. *Obv.*: Date 28(5?).
Rev.: Leg. II: rajña maha(kṣatrapasa) svama rudradamaputrasa rajña mahākṣatrapasa svama rudrasananasa
15 mm; 2.035 g

*125. *Obv.*: Date 286.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudra....(putra) ... (rajña mahakṣatrapasa) svama rudrasanasa.
14 mm; 2.076 g

126. *Obv.*: Date 28(8?).
Rev.: Leg. III: rajña mahakṣatrapa(sa) svama rudra(da)maputrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.123 g

127. Date 28x.
Rev.: Leg. III: rājña mahakṣatrapasa svama rudra.....(putra) ... (rajña).....(kṣatrapasa) svama rudrasanasa
15 mm; 2.028 g

128. *Obv.*: Date 28x.
Rev.: Leg. III: (rajña)...(kṣatra)...(vama rudra)damaputrasa rajña mahakṣatrapasa svama (rudra).....
15 mm; 2.086 g

129. *Obv.*: Date 28x.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputra-(sa) (rajña)...(trapasa) svama rudrasanasa
14 mm; 2.089 g

130. *Obv.*: Date 28x.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudra...(ma)putra(sa) rajña (maha)kṣatrapasa svama rudrasenasa
14 mm; 2.033 g

131. *Obv.*: Date 28x.
Rev.: Leg. III: rajña...(ha)kṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa [s]va(ma rudra)....
14 mm; 2.010 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*132. *Obv.*: Date 280 (or 28x).
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradāmaputrasa rajña mahakṣatrapasa svama rudrasanasa
15 mm; 2.166 g
Very crude letters.

133. *Obv.*: Date 28x.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudrasanasa
15 mm; 2.065 g

134. *Obv.*: Date 280 (or 28x).
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña (mahakṣatrapasa) svama rudrasanasa
14 mm; 1.960 g

135. *Obv.* : Date 280 (or 28x).
Rev. : Leg. III : rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.145 g

136. *Obv.* : Date 280 (or 28x?).
Rev. : Leg. III : rajña mahakṣatrapasa svama rudradamaputrasa rajña . . . . kṣa . . . . . sa sva(ma rudrasanasa)
14 mm; 2.072 g

137. *Obv.* : Date 280 (or 28x?).
Rev.: Leg. III: rajña . . . hakṣatra(pasa) svama rudra(dama)putrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.015 g

138. *Obv.*: Date 290 (or 29x?).
Rev.: Leg. III: rajña (maha)kṣatrapasa svama rudradamaputrasa rajña . . . . kṣatrapasa sva(ma) (rudra) . . . .
14 mm; 2.090 g

*139. *Obv.*: Date 290 (or 29x?).
Rev.: Leg. III: rajña ma . . . . . (sva)ma rudradamaputrasa rajña mahakṣatra(pasa) svama rudrasanasa
14 mm; 2.076 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

140. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahākṣatrapa.....
13 mm; 2.086 g

141. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatrapasa svama rudra(dama)putrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.108 g

142. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatra(pasa sva).....(rudrada)maputrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.094 g

143. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama ru(dra)sanasa
14 mm; 2.177 g

144. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatrapasa svama rudra(da)...(putra)...rajña....kṣa...va...(rudrasa)nasa
13 mm; 1.786 g. Plated.

145. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahaksatrapa(sa)..va..(rudra)... putrasa rajña mahakṣatrapasa rudrasanasa
15 mm; 1.955 g

146. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatra(pasa) [s]va...(rudra)... (putra)...rajña mahakṣatrapasa svama rudrasenasa
13 mm; 2.060 g

147. Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatra...va..(rudra)...putrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.139 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

148. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatrapasa svama ru(dra)... (pu)-trasa rajña mahakṣatrapasa svama rudrasanasa
15 mm; 2.107 g

149. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatra(pasa) [s]vama rudrasanasa
14 mm; 2.091 g

*150. *Obv.*: Date 290 (or 29x).
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.009 g

*151. *Obv.*: Date 293.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 1.940 g

*152. *Obv.*: Date 292 (or 3?).
Rev.: Leg. III: (rajña)...kṣatra...svama rudradamaputrasa rajña mahakṣatrapa(sa) svama (rudra)....
14 mm; 2.017 g

153. *Obv.*: Date 29x.
Rev.: Leg. III: rajña mahakṣatra(pa).....(putra)... (ra-jña)...(kṣatra)pasa svama rudrasenasa
14 mm; 2.094 g

154. *Obv.*: Date 29x.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 1.996 g

155. *Obv.*: Date 29x.
Rev.: Leg. IX: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatra...[s]va(ma) rudra.....(sa)
13 mm; 1.912 g

156. *Obv.*: Date 29x.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudra.....
15 mm; 2.098 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

157. *Obv.*: Date 2xx.
Rev.: Leg. III: rajña mahakṣatra(pasa) [s]va(ma) rudradamaputrasa rajña mahakṣatrapasa rudrasanasa.
14 mm; 2.118 g
Rough, barely legible letters.

158. *Obv.*: Date 2xx.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 2.036 g

159. *Obv.*: Date 2xx.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudra(dama)-putrasa rajña mahakṣatrapasa svama rudrasanasa
15 mm; 2.115 g

160. *Obv.*: Traces of date.
Rev.: Leg. III: rajña mahakṣatrapasa [s]vama rudra...(putrasa) rajña (mahakṣatra)pasa svama rudrasanasa
15 mm; 2.066 g
Crude letters.

161. *Obv.*: Date off.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa [s]va(ma rudra).....(sa)
15 mm; 2.169 g

162. *Obv.*: Trace of date.
Rev.: Leg. III: rajña mahakṣatrapasa svama rudradamaputrasa rajña mahakṣatrapasa svama rudra(sa).....
14 mm; 2.077 g

163. *Obv.*: Traces of date.
Rev.: Leg. X: rajña (maha)kṣatra...(sa) (svama rudradama)-putrasa rajña mahakṣatrapasa svama rudrasanasa
14 mm; 1.901 g

164. *Obv.*: Traces of date.
Rev.: Leg. IV: rajña mahakṣatra...sa svama rudradamaputrasa rajña mahakṣatrapasa svama rudrasa(nasa)
14 mm; 2.034 g

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

165. *Obv.*: Traces of date.
Rev.: Leg. XI: (rajña)...(kṣatra)....v....(ru)dradamaputrasa rajña mahakṣatrapasa svama rudrasana...
14 mm; 2.090 g

166. *Obv.*: Date off. Traces of Greek leg.
Rev.: Leg. X: rajña...(kṣatra)...svama rudradamaputrasa rajña mahakṣatrapasa svama rudra(sana)...
14 mm; 2.244 g

UNATTRIBUTABLE BROCKAGES

167. Date 2xx. No legend on rev.
14 mm; 1.750 g
Listed by Biddulph as Viśvasiṃha (?).

168. No date or legend.
14 mm; 1.986 g

169. No date or legend. Clear obv. image on rev.
14 mm; 1.885 g

*170. No date or legend. From the portraiture, possibly a coin of Rudrasena III (see 156).
14 mm; 1.750 g

UNIDENTIFIED

*171. Obv. and rev. badly mutilated. Possibly a coin of Bhartṛdāman.
14 mm; 1.611 g

UNATTRIBUTED COIN IN KṢATRAPA STYLE

*172. *Obv.*: Bust of usual Kṣatrapa type, with mustache. Traces of legend r. Possible trace of date (or legend) l. The bust is somewhat like that on coins of Rudrasena III.
Rev.: Caitya of unusual type. Star r., wavy line below. Lower arches of caitya are flattened; top arch is dome-shaped, coming to point on top. Vertical crescents are attached to the lower points of the top arch. The whole caitya is

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

considerably larger than those on Kṣatrapa coins. The legend, in characters evidently later than those of Kṣatrapa coins, is only partially legible:

(XII): ma?.....ha?rājakṣatrapasya

Evidently the legend is in Sanskrit, not Prakrit. The lower portions of some of the intermediate letters are visible; many of them appear to be ligatures.

14 mm; 1.930 g

A note was found with the coin, attributing it to "Kṣatrapa Swami Sihasena" (obviously wrong), and describing the coin as "unique." It also refers to "Rapson's letters of 18 July 1899 and 29 January 1905," but unfortunately provides no further information.

2. TRAIKŪṬAKA COINS

The coins of the Traikūṭaka dynasty of the latter half of the fifth century A.D. in the South Gujarat-Konkan region have been fully described by Rapson in his *Catalogue*. Coins of only two Traikūṭaka kings are known: those of Dahrasena, which are common, and of Vyāghrasena, which are rare. The ANS collection includes only coins of Dahrasena.

Traikūṭaka coins are very similar in appearance to those of the Western Kṣatrapas:

Obv.: Bust of king facing r. No dates or inscriptions.

Rev.: Caitya with line (often in three parts) below; star, made up of 5 dots l. Dotted border. Brāhmī legend around.

*173. *Rev.*: Leg. XII: maharajandradattaputra paramavaṣṇava śra maharaja dahrasana

13 mm; 2.180 g

The intended reading of the legend, in which vowel signs are omitted, is:

mahārājendradattaputra paramavaiṣṇava śrī mahārāja dahrasena

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*174. *Rev.*: Leg. XII: mahārajandradattaputra parama (vaṣṇava śra maha)raja dahrasana
13 mm; 2.217 g

175. *Rev.*: Leg. XII: mahara.....dr.....ṣṇava śra maharaja dahrasana
13 mm; 2.162 g

176. *Rev.*: Leg. XII: maharajandra(datta)putra (pa)ramavaṣṇava śra maharaja dahrasana
12 mm; 2.027 g

177. *Rev.*: Leg. I: maharajandradattaputra paramavaṣṇa(va śrama-ha)raja dahra(sa)na
13 mm; 2.460 g

178. *Rev.*: Leg. XII: maharajandradattaputra (pa)ra....ṇava...ra maharaja dahrasana
13 mm; 2.132 g

3. COINS OF KṚṢṆARĀJA

A series of silver coins of the Kṣatrapa type issued by a king Kṛṣṇa-rāja is fairly common in the Nāsik District of Maharashtra and surrounding areas. These coins were formerly attributed to an early king of the Rāṣṭrakūṭa dynasty, but this has been conclusively disproven. It is now generally agreed that these coins belong to the early Kalacuri king Kṛṣṇarāja.

In my opinion, J. F. Fleet's[1] reading of the reverse legend is correct:

paramamahaśvara-matapatṛpadanudhyata-śra-Kṛṣṇaraja,

intended to represent:

paramamāheśvara-mātāpitṛpādānudhyāta-śrī-Kṛṣṇarāja.[2]

The coins are all of a single type:

Obv.: Kṣatrapa type bust r., more or less crudely portrayed. No date or legend.

Rev.: Bull recumbent to r. 3 dots, 1 below. Brāhmī legend around.

[1] J. F. Fleet, "The Legends on the Silver Coins of the Early Guptas and Others Connected with them," *Indian Antiquary*, 12 (1885), p. 68.

[2] For a different reading see V. A. Smith, "The Coinage of the Early or Imperial Gupta Dynasty of Northern India," *JRAS*, n.s., vol. 21 (1889), p. 138.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*179. *Obv.*: Kṣatrapa type bust.
Rev.: Leg. XII: paramamahaśva(ra)....tṛ.....y...śra kṛṣṇa-raja
12 mm; 1.794 g

*180. *Obv.*: Bust, eye prominent.
Rev.: Leg. I: parama.....ṛ...danudhyata śra kṛṣṇaraja
12 mm; 2.125 g

181. *Obv.*: Crudely executed bust.
Rev.: Leg.: .....(ha)śvara matapatṛpādanudhyata śra.....
..
12 mm; 2.004 g

182. *Obv.*: As 179.
Rev.: Leg. I: paramamaha(śva)ra matapatṛpadanudh...ś....ṛ ...ṇara.....
11 mm; 1.768 g

183. *Obv.*: As 179.
Rev.: Leg. XII: paramamahaśvara matapatṛpadanu(?) dhyata śra kṛṣṇaraja
12 mm; 1.986 g

4. THE VALLABHĪ COINS

This very common, but problematic, coin type found in Gujarat and surrounding regions has been attributed with reasonable certainty to the founder of the well-known dynasty of the Maitrakas of Vallabhī (in the Saurashtra peninsula of Gujarat). The problems regarding these coins arise from the peculiar and corrupt character of their Brāhmī legend, which is still not completely understood. On the basis of the words read as "Śarvva-Bhaṭṭāraka" in the legend, the issuer is identified with Senāpati ("General") Bhaṭārka, who is known from epigraphical evidence as the founder of the Maitraka line in the fifth century A.D.[3]

The legend on all the Vallabhī coins is essentially the same. But in view of their huge numbers, it is assumed by many scholars that they

[3] See, for example, *Epigraphica Indica*, 3 (1894-95), p. 320.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

could not all have been issued by Bhaṭṭāraka (or Bhaṭārka) himself, who after all was probably only a petty ruler; but that the original type was continued without change in legend by some or all of his successors. Thus these coins are often attributed to "Bhaṭṭāraka and successors."

Various proposals, none entirely satisfactory, have been given for the reading of the Vallabhī coin legends.[4]

V. V. Mirashi's reading seems the best to date; he reads:

> rājño mahākṣatrapa [pa*]ramādityabhakta mahāsāmanta śrī Śarvva Bhaṭṭārakasa[5]

But there are several possible objections here; first of all, the syllable *pa* in *paramāditya* does not appear on any of the coins; this is attributed, perhaps weakly, to "haplography." The portion of the legend which Mirashi reads as *mahāsāmanta* is very difficult. Mirashi's reading is evidently wrong; the second letter of this part, which Mirashi reads as *ha*, is entirely unlike the *ha* in *mahākṣatrapa*. It is much more like a *ma* of the Western Kṣatrapa coins; but still, it must be admitted, it has a different form from that of the *ma* of *mahākṣatrapa*.

It seems to be impossible to decipher the legend comprehensibly without encountering such inconsistencies. Thus, for instance, the readings of the third letter of the legend as *ma* and of the last letter as *sa* are agreed to by all authorities as being obvious from context; but the

[4] G. V. Acharya, "Two Notes, on Western Kshatrapa Coins, and on Valabhi Coins," *Journal of the Asiatic Society of Bengal*, Numismatic Suppl., 47 (1937), pp. 99N–103N; V. V. Mirashi, "The Legend on Valabhi Coins," *JNSI*, vol. 6, pt. 1 (June 1944); B. L. Mankad, "Valabhi Coins in the Baroda Museum," *JNSI*, vol. 15, pt. 1 (July 1953).

[5] Mirashi's reading is based on the facsimilies of legends of the "best specimens" of Vallabhī coins as given by J. Newton in "On the Śah, Gupta, and other Ancient Dynasties of Kattiawar and Guzerat," *Journal of the Bombay Branch of the Royal Asiatic Society*, 7 (1862), p. 14. On most of the Vallabhī coins, however (including all those in the ANS collection), the legend is considerably more corrupt than on these "best specimens;" they are more like Newton's "worst" specimens in which the letters *diyta* of [*pa**]*ramaditya* have degenerated into three small vertical lines, and the *śa* of *śarvva* consists of two dots, one above the other (looking like a *visarga*). Several other letters—*ra*, *ha* and *bha*—are represented only by a short vertical line. As it stands, this more corrupt legend is undecipherable; it must be studied with reference to Newton's "best specimens."

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

fact is that the forms of the two letters are identical in most if not all specimens.

Examples of legends so corrupt as to be partly or wholly undecipherable are not, of course, particularly rare in ancient Indian numismatics; an extreme example can be cited in the Greek inscriptions of the Western Kṣatrapa coins, which, in the later period, are wholly incomprehensible. In such a case as that of the Vallabhī coins, the best that can be done is to give a rendering of what the legend is intended to say, regardless of the evident corruptions and miswritings of various individual letters. For the present series, I propose:

> rajña mahakṣatrapa [pa*]ramadatyabhakta samarasaha śrī Śarvva Bhaṭṭarakasa;

which, supplying omitted vowel signs, would read:

> rājño mahākṣatrapa [pa*]ramādityabhakta samarasiṃha śrī Śarvva Bhaṭṭārakasa,

"[Coin of] the King and Mahākṣatrapa, Śrī Śarvva Bhaṭṭāraka, most devoted worshipper of the Sun, a lion in battle."

The problem of the omitted *pa* remains. *Samarasaha* for *samarasiṃha*, "lion in battle," is, I think, paleographically more acceptable than Mirashi's *mahāsāmanta* and philologically more likely that Altekar's *samadasara* for *sammardasara*, "moving freely in battle" (suggested in his editorial note to Mirashi's article).

The Vallabhī coins are all of similar design:

> *Obv.*: Kṣatrapa-style bust r.; dotted border on some specimens. Many struck badly off center.
>
> *Rev.*: Trident symbol, Brāhmī legend around.

There are two varieties; the larger, in silver, 12-13 mm in diameter; and the smaller, in base silver or bronze, 11 mm in diameter. The smaller variety is more corrupt and crudely executed; on many specimens the legend is wholly illegible.

*184. Kṣatrapa type bust, dotted border.

> *Rev.*: Trident. Leg.: ...jña mahakṣatra.....sa...kta...vv .....ṭ....
>
> 12 mm; 1.868 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

185. *Obv.*: As 184.
Rev.: Leg.: ...jña.....(kta) (sama)...ra...r...vv...ṭ..(ka) ...
12 mm; 1.968 g

*186. *Obv.*: Bust, lower half off.
Rev.: Leg.: .....kta samarasa.....
13 mm; 2.008 g

*187. *Obv.*: Bust, left side off.
Rev.: Trident, dotted border. Leg. II: rajña ma....ṣ.....ra bhaṭṭarakasa
13 mm; 1.953 g

188. *Obv.*: Bust, left half off.
Rev.: Same as 187. Leg. II: rajña (ma)...kṣa....(śra) śarvva bhaṭṭārakasa
13 mm; 1.937 g

*189. *Obv.*: Bust, bottom off.
Rev.: Trident. Leg. II: ra(jña).....śra śarvva bhaṭṭarakasa
13 mm; 1.802 g

190. *Obv.*: As 189.
Rev.: Same. Leg. II: ...jña mahakṣatrapa samara.....
13 mm; 1.951 g

191. *Obv.*: As 189.
Rev.: Leg. I: rajña mahakṣatra.....ṭṭa..kasa
12 mm; 1.877 g

192. *Obv.*: Bust, right side off.
Rev.: Leg.: .....kta samarasaha śr.....
12 mm; 1.911 g

*193. *Obv.*: Bust, right side off.
Rev.: Leg.: .....kta samarasaha śra śarvva bhaṭṭa.....
13 mm; 1.733 g

*194. *Obv.*: Usual type.
Rev.: Leg.: ....pasa.....kta sama.....
13 mm; 2.078 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*195. *Obv.*: Off center and weakly struck. Three large lumps of metal at top.
Rev.: Poorly struck. Large lump at bottom. Leg: .....ta samarasa....r....vv.....ṭ.....
13 mm; 1.788 g

*196. *Obv.*: Bust almost complete.
Rev.: Leg.: ...dityabhakta samarasaha śra śarvva....ṭṭa....
12 mm; 1.928 g

197. *Obv.*: Bust, bottom off.
Rev.: Leg. II: rajña kṣatra.....ṭ.....sa
12 mm; 1.960 g

198. *Obv.*: Bottom off.
Rev.: Leg.: .....saha śra śarvva bhaṭṭāraka(sa)
12 mm; 2.060 g

199. *Obv.*: Bottom off.
Rev.: Leg.: .....madityabhakta sama(rasa).....r.....
12 mm; 1.957 g

200. *Obv.*: Left side off.
Rev.: Leg.: ....jña (ma)...(kṣatra).....(ś)ra śarvva bhaṭṭarakasa
13 mm; 1.780 g

201. *Obv.*: Left side off.
Rev.: Leg.: .....samarasaha śra śarvva bhaṭṭa.....
12 mm; 1.914 g

202. *Obv.*: Bust slightly off to left.
Rev.: Leg. VI: .... ñ ... kṣatra .....ma ..... sara ..... śra śarvva bhaṭṭa.....
12 mm; 1.874 g

203. *Obv.*: Weakly struck, right side off.
Rev.: Leg.: .....(sa)ra śra śarvva bhaṭṭarakasa
13 mm; 1.757 g

204. *Obv.*: Indistinct.
Rev.: Leg. VI: rajña....(kṣatra)....sa....ta...marasaha śra śarvva bhaṭṭa(raka)sa
12 mm; 1.870 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

205. *Obv.*: Right side off.
Rev.: Leg. VI: ...jña...kṣatra....t.....r.....v.....ṭ.....(sa)
12 mm; 1.921 g

206. *Obv.*: Centered, but crude design.
Rev.: Leg. I: rajña mahakṣatra.....r.....rvva....ṭṭarakasa
12 mm; 2.014 g

207. *Obv.*: Mistruck, bottom half off.
Rev.: Leg. II: rajña.....śra śarvva bhaṭṭarakasa
13 mm; 1.927 g

*208. *Obv.*: Crude bust.
Rev.: Barely legible leg. I: rajña.....sara.....
11 mm; 1.911 g. Base silver.

209. *Obv.*: Crude portrait.
Rev.: Fragmentary illegible legend.
11 mm; 1.732 g. Base silver.

210. *Obv.*: Crude bust.
Rev.: Illegible.
11 mm; 1.632 g. Base silver.

211. *Obv.*: Crude bust.
Rev.: Leg. barely legible in parts: .....kṣatra.....
11 mm; 1.862 g. Base silver.

*212. *Obv.*: Crude bust, right side off.
Rev.: Leg. II: ... jña .... (kṣa) ..... (kta) (sa)ma(rasara) śra śarvva bhaṭṭaraka(sa)
11 mm; 1.941 g. Bronze.

213. *Obv.*: Crude bust.
Rev.: Leg. II: ...(jña)....kṣatra.....kta....r....vv....ṭṭa.....sa
11 mm; 1.794 g. Bronze.

214. *Obv.*: Crude imitation of bust.
Rev.: Crude representation of trident. Traces of legend.
10 mm; 1.922 g. Bronze.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*215. As 214. Illegible traces of legend.
10 mm; 1.793 g

216. As 214.
10 mm; 2.102 g

217. As 14.
10 mm; 2.020 g

218. As 214. No legend discernible.
10 mm; 2.308 g

APPENDIX: REVISED CHRONOLOGY OF WESTERN KṢATRAPA COINS

Since the publication of Rapson's *Catalogue* a good number of new dates for Western Kṣatrapa coins have been reported in various publications. Only those which have been positively reported by what I consider authoritative sources are included in the tabulations below.[6]

Dates are from Rapson's *Catalogue* unless otherwise specified by a code letter, as identified below. All dates refer to the Śaka era (Śaka I = A.D. 79). Coins before Śaka 100 were undated.

LIST OF ABBREVIATIONS

A = G. V. Acharya, "Two Notes, on Western Kshatrapa Coins, and on Valabhi Coins," *Journal of the Asiatic Society of Bengal*, Numismatic Suppl., 47 (1937), pp. 95N-103N.

AP = H. V. Trivedi, *Western Kṣatrapa Coins in the Andhra Pradesh Government Museum, Hyderabad*, Andhra Pradesh Government Museum Series no. 8. (Hyderabad, 1964).

AS = "List of Antiquities presented by the Bhavnagar Darbar to the Prince of Wales' Museum, Bombay," *Progress Reports of the*

[6] Besides those listed, many other dates for western Kṣatrapa coins have been reported, but by less reliable or unconfirmed sources. Some of the dates given by A are plainly wrong, and are not included; other dates reported by him should be treated with caution. Two very late dates (314 and 320) have been reported for coins of Rudrashima III by K. V. Soundara Raja, "Some Interesting Coin-Data from Uparkot, Junagadh," *JNSI* 22 (1960), p. 119 and R. Jamindar, "An Unnoticed Western Ksatrapa Coin," *JNSI* 30 (1968), pp. 198-200, but the dates are not clear in the illustrations provided, and thus must be considered doubtful.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Archaeological Survey of India, Western Circle (1915), p. 29; "List of Coins Selected from the Sarvania Hoard," *Progress Reports of the Archaeological Survey of India, Western Circle* (1916), pp. 21-22.

B = D. R. Bhandarkar, "Kṣatrapa Coins from Sarvāṇiā," *Archaeological Survey of India, Annual Report* (Calcutta, 1913-14), pp. 227-45.

BG = "Bombay Gazetteer," *Gazetteer of the Bombay Presidency*, (Bombay, 1873), pp. 45-50.

G = S. Gokhale, "Ranjangoan Hoard of Kshatrapa Coins," *JNSI*, vol. 38, pt. 1 (1976), pp. 27-37.

J = G. K. Jenkins, "The Coin-Types of Śaka-Pahlava Kings of India," *JNSI*, vol. 18, pt. 2 (1956), suppl.

Date	*Kṣatrapa*	*Mahākṣatrapa*	
100		? Jīvadāman	
101			
102	Rudrasiṃha I		
103	"	Rudrasiṃha I	
104		"	(AS 1915)
105		? "	(B)
106		"	
107		? "	(J)
108		"	(BG)
109		"	
110	Rudrasiṃha I	"	
111			
112	Rudrasiṃha I		
113		Rudrasiṃha I	
114		Rudrasiṃha I	
115		"	
116		"	
117		"	(A, BG)
118		"	
119		"	(A)
		Jīvadāman	
120		"	
121	Rudrasena I		
122	? "	Rudrasena I	
123			
124			
125		Rudrasena I	
126		"	
127		"	
128		"	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	*Kṣatrapa*		*Mahākṣatrapa*	
129				
130			"	
131			"	
132			"	
133			"	
134			"	
135			"	
136			"	
137			"	
138			"	
139			"	
140			"	
141			"	
142			"	
143			"	(G)
144	Pṛthvīsena		? Rudrasena I Saṃghadāman	
145			"	
			Dāmasena	
146			? Dāmasena	
147			? "	(A)
148			"	(BG)
149			"	(G)
150			Dāmasena	(BG)
151			"	
152			"	
153			"	
154	Dāmajadaśrī II		"	
155	"		"	
156	Vīradāman		"	
157	"	(A)	"	
158	"	(BG)	"	
159	"	(B)		
160	"			
	Yaśodāman		Yaśodāman	(B)
	Vijayasena			
161	"	(G, B)	"	
			Vijayasena	(B, AS 1915)
162			"	
163			"	
164			"	
165			"	
166			"	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	*Kṣatrapa*		*Mahākṣatrapa*	
167			"	
168			"	
169			"	
170			"	
171			"	
172			"	
			Dāmajadaśrī III	(G)
173			"	(B)
174			"	
175			"	
176			"	
177			Dāmajadaśrī III	(AS 1916, B)
			Rudrasena II	(AS 1915, B)
178			"	(B)
179			"	(B)
180			"	
181			"	
182			"	(B)
183			"	
184			"	
185			"	(B, AP)
186			"	(AP, BG)
187			"	(G)
188			"	
189			"	
190			"	(BG)
191			"	(B)
192			? "	(G)
193				
194			Rudrasena II	
195			"	(A)
196			"	
197	Viśvasiṃha	(B)	"	(A, B)
198	"	(B)	? "	(B)
199	"		"	(A)
200	"			
	Bhartṛdāman	(B)		
201	"			
202	"	(B)	[Viśvasiṃha-	20x]
203	"			
204	"		Bhartṛdāman	
205			? "	
206			"	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	*Kṣatrapa*		*Mahākṣatrapa*	
207			"	
208			"	
209			"	
210			"	
211			"	
212			"	
213			"	
214			"	
215	Viśvasena	(B)	"	(B, AS 1915)
216	"		"	(A, AP, AS 1915)
217	"		"	
218	"			
219	"			
220	"	(B)		
221	"			
222	"			
223	"			
224	"			
225	"			
226	"			
	Rudrasiṃha II	(B)		
227	"			
228	"	(B)		
229	"			
230	"			
231	"			
232	"	(B)		
233	? "	(J)		
234	"	(B)		
235	"	(B)		
236	"	(B)		
237	"	(B)		
238	Rudrasiṃha II	(B)		
	Yaśodāman II	(B)		
239	"			
240	"			
241	"	(B)		
242	"			
243	"			
244	"			
245	"	(B)		
246	? "			
247	"	(B, AS 1916)		

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	*Kṣatrapa*	*Mahākṣatrapa*	
248			
249	Yaśodāman II		
250			
251			
252	Yaśodāman II		
253	”		
254	”		
255			
256			
257			
258			
259			
260			
261			
262			
263			
264			
265			
266			
267			
268			
269			
270		Rudrasena III	
271		”	
272		”	
273		”	
274			
275			
276			
277			
278			
279			
280		Rudrasena III	
281		”	
282		”	
283		”	
284		”	(A)
285		? ”	(A)
286		”	
287		”	(A)
288		”	
289			
290		Rudrasena III	(AS)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	*Kṣatrapa*	*Mahākṣatrapa*	
291			
292		Rudrasena III	
293		"	
294		"	
295			
296		Rudrasena III	(BG, AS)
297			
298		Rudrasena III	
299			
300		Rudrasena III	
301		"	(A)
302			
303			
304		Siṃhasena	
305			
306			
31x		Rudrasiṃha III	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

THE 1958 DIRHAM HOARD FROM TARTU IN ESTONIA

THOMAS S. NOONAN

In 1958 a hoard of 41 dirhams was found in the city of Tartu (Dorpat, Iur'ev) in eastern Estonia. More detailed information about the circumstances of the find is not available. The hoard was identified by Aleksei Andreevich Bykov, former head of the numismatic section of the Hermitage, and is now preserved in the Tartu City Museum (*Numismatic Inventory Book*, vol. 5, TM 143, N38, 1–41).[1] Only two brief references to the Tartu hoard have so far been published. The first appeared in E. Tõnisson's 1962 study of Estonian coin and treasure hoards of the ninth through thirteenth centuries.[2] Tõnisson's description noted only that the hoard contained 41 Arabic coins of the eighth through tenth centuries. The same information was repeated in V. V. Kropotkin's enumeration of some of the recent Kūfic coin finds from the Soviet Union.[3] Even this minimal information about the hoard was

[1] During the course of a 1975 sabbatical research trip to obtain further information on dirham hoards from the Soviet Union, I was able to visit Tartu where the officials of the city museum granted me access to the unpublished account of the hoard contained in their records. I should like to take this opportunity to thank the City Museum of Tartu for its kindness and to express my appreciation to the Office of International Programs and the Putnam Dana McMillan Professorship Award Committee, both of the University of Minnesota, for their generous financial support of my sabbatical research in the Soviet Union. I should also like to thank Michael Bates of the American Numismatic Society for his critical evaluation of the manuscript and various suggestions for its improvement.

[2] E. Tõnisson, "Eesti aardeleiud 9.–13. sajandist," *Muistsed Kalmed Ja Aarded: Arheoloogiline Kogümik*, 2, ed. H. Moora (Tallinn, 1962), p. 199, no. 80; tables, pp. 244–45.

[3] V. V. Kropotkin, "Novye nakhodki sasanidskikh i kuficheskikh monet v Vostochnoi Evrope," *NE* 9 (1971), p. 95, no. 204.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

not completely accurate. The Tartu hoard is composed exclusively of tenth-century dirhams.

According to Bykov, the Tartu hoard consisted of the following coins:

1. SĀMĀNID

ISMĀʿĪL B. AḤMAD

1–2. al-Shāsh, 286 H./A.D. 899–900
3. al-Shāsh, 288/900–1
4. al-Shāsh, 293/905–6
5. al-Shāsh, 294/906–7

AḤMAD B. ISMĀʿĪL

6. al-Shāsh, 295/907–8
7. al-Shāsh, 299/911–12

NAṢR B. AḤMAD

8. al-Shāsh, 308/920–21
9. al-Shāsh, 316/928–29
10. al-Shāsh, 318/930–31
11–12. al-Shāsh, 320/932–33
13. al-Shāsh, 322/933–34
14. al-Shāsh, 323/934–35
15. al-Shāsh, 324(?)/935–36
16. al-Shāsh, 325/936–37
17. al-Shāsh, 331/942–43
18. al-Shāsh, 33(1)/942–43
19. Samarqand, 317/929–30
20. Samarqand, 326/937–38
21. No mint, 309/921–22

NŪḤ B. NAṢR

22. al-Shāsh, 366/976–77[4]
23. Samarqand, 340/951–52
24. Bukhārā, 337/948–49

[4] The date should probably be 336/947–48. Nūḥ I b. Naṣr reigned 331–43. Nūḥ II b. Manṣūr reigned from 365 to 387, but his father was Manṣūr not Naṣr.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ʿABD AL-MALIK B. NUḤ

25–26. Samarqand, 343/954–55

MANṢUR B. NŪḤ

27–28. al-Shāsh, 355/965–66
29. al-Shāsh, 357(?)/967–68
30. al-Shāsh, 358/968–69
31–32. al-Shāsh, 359/969–70
33. al-Shāsh, 366/976–775[5]
34. Bukhārā, 352/963–64
35. Rasht, 361/971–72
36. No mint, 351/962–63

2. MUSĀFIRID OR SALLĀRID

ISMĀʿĪL AND WAHSUDĀN

37. Bardaʿa, 3xx(?)[6]

3. ʿABBĀSID

AL-MUQTADIR

38. Madīnat al-Salām, 311/923–24

AL-MUTTAQĪ

39. al-Baṣra, (3)32/943–44

[5] According to many reference works, Manṣūr I died in 365 and was succeeded by his son Nūḥ II the same year. However, dirhams of Manṣūr I from al-Shāsh with the year 366 are reported from other Kūfic hoards of the southeastern Baltic and Russia. See, for example, R. R. Vasmer, *Ein im Dorfe Staryi Dedin in Weissrussland Gemachter Fund Kufischer Münzen* (Stockholm, 1929), p. 17, nos. 162–63; W. Anderson, "Der Münzfund von Vaabina," *Sitzungsberichte der Gelehrten Estnischen Gesellschaft/Õpetatud Eesti Seltsi Aastaraamat*, 1 (Tartu/Dorpat, 1937; publ. 1938), p. 52, nos. 276, 279.

[6] Although listed with the Sāmānid coins, this dirham most likely belongs to the Musāfirid Wahsūdān who ruled from 330 to 355 and had a son, Ismāʿīl, who died around 350 (*Encyclopaedia of Islam*, 2nd ed., s.v. Musāfirids).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

4. BUWAYHID

MU'IZZ AL-DAWLA AND 'IMĀD AL-DAWLA

40. Mint illegible, (3)37/948–49

5. VOLGA BULGARS

MIKĀ'ĪL B. JA'FAR

41. Madīnat Bulghār, date illegible.

The dynastic distribution of the 41 dirhams is given in Table 1 below. As we can see, the hoard was overwhelmingly composed of Sāmānid coins, and the other four dynasties had only minimal representation.

TABLE 1

Dynastic Distribution of Dirhams in the Tartu Hoard

Dynasty	*Number of Coins*	*Percentage of Hoard*
Sāmānid	36	87.8
'Abbāsid	2	4.9
Musāfirid	1	2.4
Buwayhid	1	2.4
Volga Bulgars	1	2.4
	41	99.9

The regional distribution of the mints is perhaps even more significant than the dynastic breakdown. Of the 38 dirhams whose mint can be identified, 34 (89.5 percent) are from mints located in Transoxania-Central Asia (al-Shāsh, 26; Samarqand, 5; Bukhārā, 2; Rasht, 1). Two coins (5.3 percent) come from Irāq (Madīnat al-Salām and al-Baṣra) while there is one coin (2.6 percent) from Transcaucasia (Barda'a) and one (2.6 percent) from the middle Volga (Madīnat Bulghār). In short, Central Asian dirhams struck in Sāmānid mints formed the predominant element in the Tartu hoard.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The oldest coin in the hoard was a Sāmānid dirham of Ismāʿīl b. Aḥmad struck in al-Shāsh in 286/899–900. The most recent coin was a Sāmānid dirham of Manṣūr b. Nūḥ struck in al-Shāsh in 366/976–77. The time span between the oldest and newest coins was thus 77 years. Table 2 gives a breakdown of the 39 dateable dirhams by decade. The figures show that the coins in the Tartu hoard are fairly evenly distributed over eight decades. The hoard is primarily composed neither of dirhams which had been in circulation for a long period before its burial nor of recently-minted dirhams.

TABLE 2

Chronological Distribution of Dirhams in the Tartu Hoard

Decade	*Number of Coins*	*Percentage of Hoard*
890/91–899/900	2	5.1
900/1–909/10	4	10.3
910/11–919/20	1	2.6
920/21–929/30	5	12.8
930/31–939/40	8	20.5
940/41–949/50	6	15.4
950/51–959/60	3	7.7
960/61–969/70	8	20.5
970/71–979/80	2	5.1
	39	100.0

The predominance of Sāmānid dirhams compels us to examine their distribution by ruler in greater detail. The basic quantitative data can be found in the third and fourth columns of Table 3. The largest number of Sāmānid dirhams, about 3/8, was struck in the long reign of Naṣr b. Aḥmad. The next largest group, slightly over 1/4, comes from the reign of Manṣūr b. Nūḥ, during whose lifetime the hoard was presumably assembled. There are very few coins from the relatively short reigns of Aḥmad b. Ismāʿīl and ʿAbd al-Malik b. Nūḥ. In brief, the quantitative breakdown by reign does not indicate any noteworthy patterns.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Table 3

Distribution of Sāmānid Coins in the Tartu Hoard by Ruler

Ruler and Years of Reign	*Total Years in Reign*	*Percentage of Total Span (279–366)*	*Number of Coins*	*Percentage of All Sāmānid Coins*	*Coins Per Year*
Ismāʿīl b. Aḥmad, 279–95	16	18.4	5	13.9	.31
Aḥmad b. Ismāʿīl, 295–301	6	6.9	2	5.6	.33
Naṣr b. Aḥmad, 301–31	30	34.5	14	38.9	.47
Nūḥ b. Naṣr, 331–43	12	13.8	3	8.3	.25
ʿAbd al-Malik b. Nūḥ, 343–50	7	8.0	2	5.6	.29
Manṣūr b. Nūḥ, 350–65	16*	18.4	10	27.8	.63
	87	100.0	36	100.1	

* Manṣūr apparently died in 365 (see note 5) but coins dated 366 appear with his name (see coin 33). As a result, a 16-year span is used for the statistical purposes of this table.

Original from UNIVERSITY OF MICHIGAN

Columns one, two, and five of Table 3 were used to determine the average number of Sāmānid coins in the hoard per year for each ruler. If the same number of coins was issued each year and each coin circulated for about the same time, we would expect to find fewer coins per year from earlier reigns and more coins per year from later reigns. The Tartu hoard does not conform to this model. The largest number of coins per year comes from the most recent reign, as would be expected, but the coins per year from the reigns of Nūḥ and ʿAbd al-Malik are fewer than those from the much earlier reigns of Ismāʿīl and Aḥmad. Of all the reigns before that of Manṣūr, Naṣr's shows the greatest number of coins per year. Rather than the increase in number of coins per year we would anticipate with each successive reign, we encounter a decline under Nūḥ and ʿAbd al-Malik. Their reigns are thus underrepresented in the hoard while that of Naṣr is overrepresented. These figures may reflect lower production in some or all Sāmānid mints during the reigns of Nūḥ and ʿAbd al-Malik. There appears to have been increased production in some or all Sāmānid mints under Naṣr. The information on coins per year is therefore more revealing than the basic data on the number of coins from the reign of each ruler.

TABLE 4

Distribution of Dirhams in the Tartu Hoard by Mint

Mint	*Number*	*Percentage of Hoard*
al-Shāsh	26	63.4
Samarqand	5	12.2
Unknown	3	7.3
Bukhārā	2	4.9
Rasht	1	2.4
Bardaʿa	1	2.4
Madīnat al-Salām	1	2.4
al-Baṣra	1	2.4
Madīnat Bulghār	1	2.4
	41	99.8

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The mint distribution of the 41 dirhams given in Table 4 presents an interesting phenomenon. The vast majority of the coins in the hoard, over 5/8, was struck in al-Shāsh. The only other mint with a significant percentage of the Tartu dirhams was Samarqand. Furthermore, Table 5 demonstrates that the al-Shāsh dirhams are well represented among the coins from most of the Sāmānid rulers, and composed 72.2 percent of all Sāmānid dirhams in the hoard. In this connection, it is striking that the percentages for the two reigns with the largest concentrations of coins are 78.6 percent (Naṣr b. Aḥmad) and 70.0 percent (Manṣūr b. Nūḥ). Aside from the period 331–50 H., which is poorly represented in the hoard, al-Shāsh dirhams predominate among both older and newer Sāmānid dirhams.

TABLE 5

Distribution of al-Shāsh Dirhams in the Tartu Hoard by Ruler

Ruler	*Total Dirhams*	*Number al-Shāsh*	*Percentage al-Shāsh*
Ismāʿīl b. Aḥmad	5	5	100.0
Aḥmad b. Ismāʿīl	2	2	100.0
Naṣr b. Aḥmad	14	11	78.6
Nūḥ b. Naṣr	3	1	33.3
ʿAbd al-Malik b. Nūḥ	2	0	0.0
Manṣūr b. Nūḥ	10	7	70.0

The weak representation of al-Shāsh dirhams from 331–50 H. is evident when we examine the number of al-Shāsh dirhams per year for each reign (Table 6). It is interesting to note that the precipitous drop in the number of al-Shāsh dirhams per year and the marked rise in the number of dirhams per year from other mints comes during the reigns of Nūḥ and ʿAbd al-Malik, a period whose coins, as we have seen, are noticeably underrepresented in the hoard as a whole. These figures raise the possibility that, while the overall production of Sāmānid mints may have declined in the period 331–50 H., the decline was relatively more severe in al-Shāsh than in other Sāmānid mints.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 6

Number of Sāmānid Dirhams Per Year from Mints in the Tartu Hoard Given by Reigns

Ruler	*al-Shāsh Coins/Year*	*Other Mints-Coins/Year*
Ismāʿīl b. Aḥmad	.31	.00
Aḥmad b. Ismāʿīl	.33	.00
Naṣr b. Aḥmad	.37	.10
Nūḥ b. Naṣr	.08	.17
ʿAbd al-Malik b. Nūḥ	.00	.29
Manṣūr b. Nūḥ	.44	.19

In summary, the Tartu hoard was composed overwhelmingly of Sāmānid dirhams from Transoxania which had been struck over the prior eight decades. There was no notable concentration of either very new or very old dirhams. Among the Sāmānid dirhams, those from al-Shāsh were predominant. Perhaps the most striking feature of the hoard was the disproportionate number of dirhams per year from several Sāmānid reigns and the sharp fluctuation in the number of al-Shāsh dirhams per year for various reigns. These variations can perhaps best be explained by changes in the production of the Sāmānid mints during the time under consideration.

As we have seen, Central Asian dirhams composed almost 90 percent of the coins in the Tartu hoard. It might appear from these figures that the hoard as a whole originated in Transoxania. Such a supposition is strengthened when we consider that the most recent coins (nos. 27–35) are all Sāmānid dirhams from Central Asia. Under normal conditions, local coins would presumably occupy a major place among the most recent dirhams in a hoard. The few coins from Transcaucasia and Iraq found in the Tartu hoard can be attributed to the circulation of some dirhams from the more westerly provinces of Islam within Transoxania. At the same time, we must acknowledge that the presence of a dirham issued by the Bulgar state along the middle Volga River raises certain problems concerning the Central Asian origins of the hoard. If we exclude as unlikely the possibility that the Volga Bulgar dirham was obtained in Transoxania, it appears that this dirham was added to the Tartu hoard somewhere in eastern Europe. One obvious explanation

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

is that the Tartu hoard was brought from Central Asia to Estonia via the Volga Bulgar lands where a local dirham might easily have been included. Alternatively, the hoard could have been formed in the Volga Bulgar lands, at some other intermediary point, or in Estonia. Tenth-century dirham hoards from Russia and adjoining areas were overwhelmingly composed of Sāmānid dirhams.[7] In addition, Volga Bulgar dirhams are found in many Russian and Estonian hoards of the tenth century while several separate finds of tenth-century Volga Bulgar dirhams have been recorded in these same regions.[8] In brief, the Tartu hoard may well have been formed somewhere in eastern Europe from the dirhams available there.

The above discussion clearly demonstrates that even if the Tartu hoard originated in Central Asia, it was not brought to Estonia unaltered. The Tartu hoard is not unique in this respect. Volga Bulgar dirhams were added to many tenth-century hoards from eastern Europe while the period from 970 also saw the appearance of western European deniers in Russian and Estonian hoards. Byzantine coins, too, are found in eastern European hoards of the tenth and eleventh centuries.[9] In short, dirhams were not necessarily brought directly from Central Asia to Estonia and then immediately buried there. The mixture of Volga Bulgar, western European, and Byzantine coins with dirhams from Transoxania in eastern European hoards of the tenth and eleventh centuries seems to show that dirhams circulated, at least to a limited extent, in eastern Europe, and that it was during the course of such circulation that coins struck in different parts of Europe were mixed with the dirhams coming from Central Asia. Such a conclusion agrees with our written sources, which strongly suggest that Islamic merchants met their eastern European counterparts in such intermediary places

[7] R. R. Vasmer, "Ob izdanii novoi topografii nakhodok kuficheskikh monet v Vostochnoĭ Evrope," *Izvesti͡a Akademii Nauk SSSR, Otdelenie obshchestvennykh nauk*, 6–7 (1933), p. 478; V. L. I͡anin, *Denezhno-vesovye sistemy russkogo srednevekov'ia: Domongol'skii period* (Moscow, 1956), pp. 118–40.

[8] V. V. Kropotkin, "Torgovye sviazi Volzhskoĭ Bolgarii v X v. po numizmaticheskim dannym," *Drevnie slavi͡ane i ikh sosedi*, MIA 176 (Moscow, 1970), pp. 146–50.

[9] V. V. Kropotkin, *Klady vizantiiskikh monet na territorii SSSR* (Moscow, 1962) and "Novye nakhodki vizantiiskikh monet na territorii SSSR," *VV* 26 (1965), pp. 166–89.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

as Khazaria and, especially, Bulgaria on the Volga.[10] It was Rus' and/or Rūs[11] merchants who brought Islamic goods from Khazaria and Bulgaria on the Volga to the Russian centers. The merchants who acted as intermediaries in bringing dirhams from Transoxania to Estonia were presumably responsible for mixing these dirhams with Volga Bulgar, western European, and Byzantine coins and thus creating a certain degree of monetary circulation.

Once we accept the existence of even limited monetary circulation in eastern Europe, it becomes important to compare the dirham hoards from one region with contemporaneous dirham hoards from other regions. Such comparisons are the only way we can distinguish between the universal characteristics of dirham hoards at a given time and the unique features of either a single hoard or the hoards from a single region. It is not my intention to use this examination of the relatively small 1958 Tartu hoard for a comparative study of all other contemporaneous dirham hoards in eastern Europe. Nevertheless, it would be appropriate, in order to evaluate the Tartu hoard in perspective, to compare it with contemporaneous dirham hoards from Estonia and with hoards from the Latvian and northwest Russian lands lying directly to the south and east of Estonia. This comparison will help us to discover if the Tartu hoard possesses any notable characteristics which might be attributed to monetary circulation in eastern Europe.

There are four Estonian hoards whose most recent coins date to the period 966/67–986/87, the two decades preceding and following the most recent dirham in the Tartu hoard (see Table 7). The 1958 Tartu hoard falls into what can be called the transitional era in the mediaeval monetary history of the southeastern Baltic. During the period 970 – ca. 1020, dirhams continued to reach Estonia and Latvia while, for the first time, western European deniers appeared in the coin hoards of this

[10] These written sources are discussed in numerous studies. A good recent work which analyzes the mediaeval Persian and Arabic sources on Islamic relations with eastern Europe is B.N. Zakhoder, *Kaspiiskii svod svedenii o Vostochnoĭ Evrope: Gorgan i Povolzh'e v IX-X vv.*, 1–2 (Moscow, 1962, 1967).

[11] The Rus' are a people mentioned in mediaeval Russian sources while Rūs is the word found in Arabic and Persian sources. Although both peoples were active in the oriental trade in mediaeval Russia, scholars have not agreed on the relationship of the Rus' to the Rūs. Thus, both variants are in use here.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 7

Four Estonian Coin Hoards of the Period 966/67–986/87[a]

Location of Find, Date of Most Recent Coin (Number of Coins)	*Percentage Dirhams*	*Percentage W. European Deniers*	*Percentage Other Coins*
Kumna/Metsaküla, 970—(51)	49.0	51.0	0.0
Tartu, 976–77—(41)	100.0	0.0	0.0
Erra-Liiva, 980—(128)	96.9	0.0	3.1
Essemägi/Ääsmae, 985—(335)	100.0	0.0	0.0

[a] The Kumna (Metsaküla) hoard is discussed in A. Friedenthal, "Der Münzfund von Kumna," *Beiträge zur Kunde Estlands*, 18 (Tallinn, 1932), pp. 5–13; the Érra-Liiva hoard in V.V. Kropotkin, "Novye nakhodki sasanidskikh," p. 95, no. 205; the Essemägi (Ääsmae) hoard in H. Frank, "Die baltisch-arabischen Fundmünzen," *Mitteilungen aus dem Gebiete der Geschichte Liv-, Est- und Kurlands*, Gesellschaft für Geschichte und Altertumskunde der Ostseeprovinzen Russlands, 18 (Riga, 1908), p. 393, no. 50.

area. The Tartu hoard is interesting because chronologically it follows immediately after the Kumna (Metsaküla) hoard, the first Estonian hoard which contained western European coins. Table 7 indicates that two quite different types of hoards existed in Estonia during the 20 years under discussion. The Kumna (Metsaküla) hoard with its almost equal Kūfic and western European components represents the "mixed" hoards which were to characterize this area for the next century and a half. The Tartu hoard, however, belongs to the second type, that is, those overwhelmingly or entirely composed of either Kūfic or western European coins. For the two decades in which we are interested, the second group was represented by predominantly or exclusively Kūfic hoards. The Tartu hoard, like those from Erra-Liiva and Essemägi (Ääsmae), did not contain a single western European coin. It was a "traditional" hoard made up primarily of dirhams rather than a new type mixed hoard including western European deniers. One might even conjecture that the Tartu hoard was buried soon after its dirhams reached Estonia, before they had the chance to circulate and become mixed with western European and Byzantine coins.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The next step in our analysis should be to compare dynastic and regional distribution, chronological breakdown, and mints of the dirhams in the four Estonian hoards. Such a comparison has proved to be impossible. Of the 25 dirhams in the Kumna (Metsaküla) hoard, Friedenthal was able to determine the dynasty and ruler of only 12 (48 percent) and the mint and year of 5 (20 percent). I would be reluctant to put too much reliance on any data extracted from such a small number of dirhams. There is no enumeration of the dirhams in the Erra-Liiva hoard and the published reports contain different figures. Kropotkin indicates 124 ʿAbbāsid and Sāmānid dirhams, 2 Byzantine coins, and 2 coins from India. Tõnisson had earlier noted 179 coins: 176 Arabic, 2 Byzantine, and 1 from India.[12] The record of the hoard in the Institute of Archaeology of the Estonian Academy of Sciences (TAAM 13751/219) is not complete. Given the present state of our knowledge, we cannot make much use of the Erra-Liiva hoard except for general aggregate data. Finally, the description of the Essemägi (Ääsmae) hoard found in Frank is confusing, to say the least. We do not possess reliable information about the individual dirhams in this hoard. It is therefore impossible to make any valid comparison of the dirhams in the four Estonian hoards. Perhaps the greatest importance of the 1958 Tartu hoard is, then, the fact that it provides, for the first time, hard data on the composition of an Estonian dirham hoard during the period under study.

Since our information on Estonian hoards of the period 966/67–986/87 is so limited, about the only thing we can do is indicate which dynasties were represented among the non-western European coins from these hoards (see Table 8). Included in this table are two other Estonian hoards from the period under study which were excluded from earlier consideration because accounts of them are not complete: the 969/70 hoard from Kavastu (Kawast)[13] and the 966/67 hoard from Warrol (Vara).[14] Table 8 shows that the presence of Sāmānid dirhams was the main common characteristic of these hoards. In addition, five of the

[12] Tõnisson, no. 46, p. 195; tables, pp. 242–43,

[13] A. K. Markov, *Topografiia kladov vostochnykh monet (sasanidskikh i kufícheskikh)* (St. Petersburg, 1910), p. 56, no. 323.

[14] Frank, p. 385, no. 9.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 8

Non-Western European Dynasties Represented in Estonian Kūfic Hoards of the Period 966/67–986/87

	Tartu	*Kumna*	*Erra-Liiva*	*Ääsmae*	*Vara*	*Kawast*
Sāmānid	×	×	×	×	×	×
ʿAbbāsid	×	×	×	×		×
Musāfirid	×					
Buwayhid	×	×		×	×	×
Volga Bulgar	×			×		
Byzantine			×			
India			×			
Umayyad				×		
Imitations				×		×

six hoards contained ʿAbbāsid and Buwayhid dirhams. The 1958 Tartu hoard therefore appears to be typical of Estonian hoards of this period in three of its dynastic components. On the other hand, Volga Bulgar dirhams were found in only one other hoard while none of the other five hoards had Musāfirid coins. The presence of these dirhams in the Tartu hoard probably reflects the great diversity of coins found, in small numbers, in many of the hoards of this era. Incomplete information about most of the other Estonian hoards makes any attempt to reach meaningful comparisons of their dynastic components impossible. In sum, the types of Kūfic coins found in the Tartu hoard do not appear to diverge from those found in other contemporaneous Estonian hoards. This does not mean that the Tartu hoard was necessarily typical of the dirhams found in Estonian hoards of the same period.

It had been my intention to compare the Tartu hoard with Latvian hoards from the 20-year era under discussion in order to contrast the Tartu dirhams with hoards from the region directly south of Estonia. However, I have been unable to identify any Latvian hoards of this period. On the other hand, there are several dirham hoards of this time from the regions of Russia adjoining Estonia, that is, the Novgorod and Pskov lands. I have also included another Kūfic hoard from northwestern Russia which was published in full. The abundant data on these Russian hoards enable us to pursue our comparative analysis of the Tartu hoard in depth.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Table 9

Dynastic Distribution of Six Dirham Hoards from Northwest Russia (Expressed in Percentages)*

Location of Find, Date of Most Recent Coin (Number of Coins)	*Governors of Tabaristan*	*Umayyad*	*'Abbāsid*	*Sāmānid*	*Ḥamdānid*	*Buwayhid*	*Ziyārid*	*Abū Dā'ūdid*	*Amirs of Andarāba*	*Farīgunid*	*Khwārizm-Shāhs/Afrighid*	*Imitation Sāmānid*	*Volga Bulgar*	*Unidentified Kūfic*	*Byzantine & Western European*
1953 Nerev, 971/72—(327)	0.3		4.9	86.9	0.6	2.1	0.9				0.3	4.0			
Novaia Mel'nitsa, 973/74—(59)			10.2	79.6	1.7		5.1		1.7			1.7			
1956 Nerev, 974/75—(484)		0.2	5.0	78.7	0.2	5.0	0.4	0.6	4.3	1.9		2.7	0.8		0.2
Velikie Luki, 976/77—(53)			3.8	77.4	1.9	7.5	7.5				1.9				
Erilovo, 978—(398)			7.3	80.9	2.0	5.0	0.7		0.5			1.8	1.5		0.3
Staryi Dedin, 978/79—(201)			3.0	76.1	0.5	2.0	1.0					14.9	0.5	0.5	1.5

* The 1953 Nerev hoard from the city of Novgorod is discussed in S. A. Ianina, "Nerevskii klad kuficheskikh monet X veka," *Trudy Novgorodskoĭ Arkheologicheskoĭ Ekspeditsii*, 1, MIA 55 (Moscow, 1956), pp. 180–207; the Novaia Mel'nitsa, Novgorod raion and oblast' hoard in Ianin, Tables 1, 2; the 1956 Nerev hoard from the city of Novgorod in S. A. Ianina, "Vtoroi Nerevskii klad kuficheskikh monet X v.," *Novye metody v arkheologii: Trudy Novgorodskoĭ Arkheologicheskoĭ Ekspeditsii*, 3, MIA 117 (Moscow, 1963), pp. 287–330; the hoard from near Velikie Luki in the former Pskov province in Markov, pp. 35–36, no. 203; the Erilovo, Ostrov raion, Pskov oblast', hoard in Ianin, Tables 1, 2; and the Staryi Dedin, Klimovich raion, Mogilev oblast', hoard in Vasmer, *Ein im Dorfe Staryi Dedin.*

Original from UNIVERSITY OF MICHIGAN

Table 9 contains the data on the dynastic distribution, in percentages, of six contemporaneous hoards from northwestern Russia. The most recent coin from each of these hoards dates to the 970s. All six Russian hoards are composed predominantly of Sāmānid dirhams, the numbers ranging from 76.1 percent to 86.9 percent. In addition, all six hoards contain some ʿAbbāsid coins and at least one Hamdānid and Ziyārid dirham. Imitation Sāmānid coins and Buwayhid dirhams are found in five hoards. Byzantine coins and dirhams issued by the Volga Bulgars and the Amīrs of Andarāba were in three of the six Russian hoards. A few coins from six other dynasties were contained in one or two of the hoards. In general, the larger the hoard, the more diverse its dynastic composition. The 1956 Nerev hoard, the largest in our group, contained 12 different types of coins. The Novaiâ Mel'nitsa and Velikie Luki hoards, which have less than 60 dirhams each, contain only six different types of coins. Regardless of size, however, the percentage of Sāmānid coins remains fairly constant.

The percentage of Sāmānid dirhams (87.8) in the Tartu hoard is comparable to that in the northwest Russian hoards; it is slightly higher than that found in five of the Russian hoards but less than one percent more than the figure from the 1953 Nerev hoard. It is therefore hard to point to any significant difference between the Tartu and Russian hoards with respect to their overwhelming Sāmānid composition. On the other hand, there is some difference in their percentages of non-Sāmānid dirhams. The Tartu hoard did not contain the Hamdānid or Ziyārid coins found in all the Russian hoards or the imitation dirhams found in five of the Russian hoards. Volga Bulgar dirhams, which are in the Tartu hoard, are found in only half the Russian hoards while none of the Russian hoards contains a Musāfirid dirham, which was found in the Tartu hoard. In the area of non-Sāmānid coins, the chief and, perhaps, sole similarity between the Tartu and Russian hoards lies in their small percentages of ʿAbbāsid and Buwayhid issues.

It is difficult to determine if the differences in percentages of non-Sāmānid coins in the Tartu and northwest Russian hoards have any significance. As we have seen, the number of dynasties represented in a hoard depends, to a large extent, on its size. The absence of various dynasties in the Tartu hoard can thus be linked to the fact that it is smaller than any of the northwest Russian hoards. Furthermore, the

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

fragmentary data on contemporaneous Estonian hoards prevents any definitive conclusion about which non-Sāmānid dynasties were represented in Estonian hoards of this era. Even more important, it seems safe to assume that most of the non-Sāmānid dirhams were brought into eastern Europe from Central Asia along with Sāmānid dirhams. The presence or absence of various non-Sāmānid dirhams in eastern European hoards of this time would, therefore, depend greatly on the vagaries of monetary circulation in Central Asia. It can therefore be argued that the small non-Sāmānid component of the northwest Russian and Tartu hoards reflects, more than anything else, the non-Sāmānid dirhams available in Transoxania at the time these hoards were being formed. The presence of one or a few non-Sāmānid dirhams in one eastern European hoard and their absence in another may be the result of chance. Finally, I am not aware of any reason why Hamdānid or Ziyārid dirhams, which were accepted in northwest Russia, should be deliberately excluded from Estonia. All this discussion suggests that we should not attach great importance to the differences in the dynastic distribution of the non-Sāmānid dirhams between the Tartu and northwest Russian hoards.

TABLE 10

Regional Distribution of Six Dirham Hoards from Northwest Russia
(Expressed in Percentages)

	Central Asia	*Near East*	*Elsewhere*
1953 Nerev	87.2	8.8	4.0
Novaiâ Mel'nitsa	81.3	17.0	1.7
1956 Nerev	85.5	10.8	3.7
Velikie Luki	79.3	20.7	0.0
Erilovo	81.4	15.0	3.6
Staryi Dedin	76.1	6.5	16.9

Table 10 shows the regional distribution of the coins in the six northwest Russian hoards. As could be expected, the abundance of Sāmānid dirhams has resulted in a decided Central Asian dominance. Coins from the more western regions of Islam, here designated "Near East"

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

for simplicity, comprised only 6.5 percent to 20.7 percent of the dirhams in the hoards. Coins from other regions (imitation dirhams, Bulgaria on the Volga, Byzantium, western Europe) vary from 0.0 percent to 16.9 percent. In the Tartu hoard, 89.5 percent of the dirhams originated in Transoxanian mints, 7.9 percent were from the Near East, and 2.6 percent came from elsewhere. In other words, the Tartu hoard contained a slightly higher percentage of Central Asian dirhams than did the northwest Russian hoards. We may recall, in this respect, that the percentage of Sāmānid dirhams in the Tartu hoard was higher than that for all six of the northwest Russian hoards. Given the absence of other contemporaneous Estonian hoards, it is hard to say what importance, if any, should be attached to the somewhat greater prominence of Central Asian/Sāmānid dirhams in the Tartu hoard.

TABLE 11

Chronological Distribution of the Dirhams from Five Hoards from Northwest Russia (Expressed in Percentages)

	1953 Nerev—(118)	*Novaia Mel'nitsa—(53)*	*1956 Nerev—(237)*	*Erilovo—(384)*	*Staryi Dedin—(156)*
Pre-890/91	0.9	5.6	0.4	0.8	0.6
890/91–899/900	2.5	1.9	0.8	0.0	2.6
900/1–909/10	1.7	1.9	2.5	1.6	4.5
910/11–919/20	0.0	1.9	3.4	3.4	7.7
920/21–929/30	6.8	1.9	3.0	6.2	10.3
930/31–939/40	11.0	11.3	9.3	18.0	14.7
940/41–949/50	14.4	20.8	18.1	17.4	10.3
950/51–959/60	16.1	9.4	13.9	20.0	16.0
960/61–969/70	44.9	34.0	41.4	19.3	19 9
970/71–979/80	1.7	11.3	7.2	13.3	13.4

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The chronological distribution of the dirhams from five northwest Russian hoards is shown in Table 11. The most interesting conclusion to be drawn from this table concerns the similarities and differences within the Russian hoards. All contain a small percentage of coins struck before 890; in four of the hoards this is less than one percent. Similarly, none of the hoards contain a significant percentage of coins issued before 920 and, in four of the five cases, before 930. At the same time, the three somewhat earlier hoards seem to have a chronological distribution pattern distinct from that of the two slightly later hoards. In each of the first three hoards, there is a significant concentration of dirhams of the 960s which ranges from 1/3 to over 2/5 of the entire hoard. The issues from the two later hoards are distributed much more evenly over the period from the 930s to the 970s. The Tartu hoard does not fit either of these general patterns and also seems not to have the same overall chronological distribution as the Russian hoards. First, it contains none of the pre–890 dirhams present in small quantities in all the Russian hoards. Second, a significantly greater percentage (over twice) of the Tartu hoard than is true for the Russian hoards dates from the 890s and 900s; the percentage from the 920s and 930s in the Tartu hoard is also greater. In short, the Tartu hoard contains a significantly larger percentage of earlier coins than do the five Russian hoards. Between 1/2 and 5/8 of the dirhams in the northwest Russian hoards were minted after 949/50, while only 1/3 of the Tartu coins were minted during the comparable period. Finally, the Tartu hoard lacks the notable concentration of coins from the 960s found in the first three Russian hoards, and its dirhams were not as evenly distributed over the decades from the 930s as was true for the latter two hoards.

The considerable differences in chronological distribution between the Tartu and Russian hoards are also apparent when we compare the distribution of the Sāmānid dirhams in each. Table 12 shows this distribution for three of the northwest Russian hoards. A smaller percentage of the Sāmānid dirhams in the Russian hoards comes from the reigns of Ismāʿīl b. Aḥmad, Aḥmad b. Ismīʿāl, and Naṣr b. Aḥmad and a greater percentage from the reigns of Nūḥ b. Naṣr, ʿAbd al-Malik b. Nūḥ, and Manṣūr b. Nūḥ.

We can summarize this discussion by emphasizing the important chronological differences between the Tartu and Russian hoards. For

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 12

Distribution of Sāmānid Dirhams by Ruler in Three Hoards from Northwest Russia (Expressed in Percentages)

	1953 Nerev (*203*)	*1956 Nerev* (*355*)	*Staryi Dedin* (*153*)
Ismāʿīl b. Aḥmad	2.0	0.6	7.2
Ismāʿīl or Aḥmad	0.5	0.3	0.0
Aḥmad b. Ismāʿīl	1.5	1.4	3.3
Naṣr b. Aḥmad	23.6	21.1	31.4
Naṣr or Nūḥ	0.0	5.1	0.0
Nūḥ b. Naṣr	16.2	20.3	15.0
Nūḥ or ʿAbd al-Malik	1.5	0.8	0.0
ʿAbd al-Malik b. Nūḥ	15.3	10.7	9.1
ʿAbd al-Malik or Manṣūr	1.0	0.0	0.0
Manṣūr b. Nūḥ	38.4	39.7	32.7
Nūḥ b. Manṣūr	0.0	0.0	1.3

some unknown reason, the Tartu hoard contained a larger percentage of older coins than the Russian hoards and the new dirhams in the Tartu hoard did not follow either of the two Russian patterns for the distribution of the more recent dirhams. While the vast predominance of Sāmānid dirhams created some general chronological similarities between the Tartu and Russian hoards, more detailed analysis has demonstrated the existence of distinct differences between the ages of the dirhams found in the Tartu hoard and the hoards of northwestern Russia.

TABLE 13

Number of Sāmānid Coins/Year for Each Ruler in Three Hoards from Northwest Russia

	1953 Nerev	*1956 Nerev*	*Staryi Dedin*
Ismāʿīl b. Aḥmad	0.25	0.13	0.69
Aḥmad b. Ismāʿīl	0.19	0.83	0.83
Naṣr b. Aḥmad	1.60	2.50	1.60
Nūḥ b. Naṣr	2.75	6.00	1.92
ʿAbd al-Malik b. Nūḥ	4.43	5.43	2.00
Manṣūr b. Nūḥ	4.88	8.81	3.13

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The chronological differences between the northwest Russian and Tartu hoards also become apparent when we measure the number of Sāmānid dirhams per year in the Russian hoards. The figures for three such hoards, given by reigns, are found in Table 13. In all three hoards, the number of coins per year for each reign steadily increases as we approach the approximate date of burial. The only exceptions, and rather small ones at that, involve the data for Nūḥ and ʿAbd al-Malik in the 1956 Nerev hoard and for Ismāʿīl and Aḥmad in the 1953 Nerev hoard. In general, the Russian hoards conform to our ideal model of an increasing number of coins per year for each successive ruler. But the Tartu hoard, it will be recalled, deviated noticeably from this pattern for the reigns of Nūḥ and ʿAbd al-Malik. Regardless of the fluctuations in the production of Sāmānid mints, our original expectation of more coins per year for each successive ruler seems to be validated and we cannot explain the divergent figures for the Tartu hoard by variations in mint output in Transoxania. We shall return to this question later.

TABLE 14

Mint Distribution of Dirhams in Three Hoards from Northwest Russia (Expressed in Percentages)

	1953 Nerev (*154*)	*1956 Nerev* (*342*)	*Staryi Dedin* (*166*)
al-Shāsh	31.8	31.6	39.2
Samarqand	37.7	31.0	32.5
Bukhārā	16.2	12.9	10.8
Others	14.3	24.5	17.5

Table 14 gives the distribution of the dirhams in three Russian hoards by mint. Al-Shāsh and Samarqand were clearly the two most-represented mints. Bukhārā, the third most-represented mint, was far behind. The mint distribution of the Tartu hoard differs distinctly from this Russian pattern. Al-Shāsh dirhams are over 60 percent of the Tartu dirhams. Samarqand dirhams constitute approximately 1/5 the number of al-Shāsh dirhams in the Tartu hoard while the number of Samarqand

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

and al-Shāsh dirhams from the Russian hoards is almost the same. The percentage of Bukhārā coins in the Tartu hoard is also much less (1/2 to 1/3) than that in the Russian hoards. While al-Shāsh dirhams compose the vast majority of the Tartu hoard issues, they constitute only a sizeable minority of the coins in the Russian hoards.

Comparison of the mint distribution between the Tartu and northwest Russian hoards thus reveals a significant difference: al-Shāsh dirhams are twice as prominent in the Tartu hoard as in the Russian hoards while the relative number of Samarqand and Bukhārā dirhams is considerably smaller in the Tartu hoard. It is not immediately clear why the mint distribution of the dirhams in the Tartu hoard should be so different from that found in the Russian hoards.

The first part of this study sought to determine the more important characteristics of the dirham hoard found at Tartu in 1958. Identification of these characteristics was followed by the comparison and contrast of the Tartu hoard with contemporaneous dirham hoards from Estonia and adjoining regions. This comparative analysis could not be fully undertaken because of limited data on the five other known Estonian Kūfic hoards of this period. The absence of contemporaneous Latvian hoards ruled out the comparison of these hoards with the Tartu hoard. Information was available on several hoards of the 970s found in the area of Russia which borders on Estonia. The comparison of the Tartu hoard with these Russian hoards showed that there were some broad similarities which arose from the fact that both were overwhelmingly composed of Sāmānid dirhams from Central Asia. Even more interesting, however, was the discovery of several significant differences between the Tartu and northwest Russian hoards. The Sāmānid dirhams from the Tartu hoard were generally older and al-Shāsh dirhams were much more prominent. The number of Sāmānid coins per year steadily increased during each reign in the Russian hoards, unlike the pattern of the Tartu hoard. The Tartu hoard therefore possessed several key characteristics which distinguished it from Kūfic hoards found in nearby Russian lands.

We might well have expected the Tartu and Russian hoards to be quite similar. After all, the dirhams found in Estonian hoards presumably came from the same coin stock as the dirhams buried in northwestern Russia. The only difference between the two would seem to be

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the route by which they moved north. Some dirhams moved from the upper Volga region to the north by various rivers toward Novgorod while other dirhams went north from the upper Volga via Lake Chud' and the Narva River along the Russian-Estonian frontier. The Tartu hoard, however, raises the possibility that the differences between Estonian and northwest Russian hoards during the period 966/67-986/87 went far beyond alternate routes. The absence of detailed data on contemporaneous Estonian hoards makes it impossible to determine if the Tartu hoard was typical or anomalous. Furthermore, the small size of the Tartu hoard could mean that relatively few Sāmānid coins may have distorted the chronological and mint distributions. Nevertheless, one possible explanation for the differences between the Tartu and Russian hoards should be noted. Written evidence suggests very strongly that dirhams did not come directly from Transoxania to eastern Europe but were brought from Bulgaria on the Volga or, at an earlier period, from Khazaria by Rūs/Rus' merchants. The existence of such intermediaries also explains how Byzantine, Volga Bulgar, and western European coins were mixed with the dirhams sent from Transoxania. While Volga Bulgar dirhams were most likely added in Bulgaria on the Volga, neither Byzantine coins of the tenth-eleventh centuries[15] nor very many western European coins ever reached Volga Bulgar lands.[16] These coins were most probably mixed with dirhams at some Russian center where coins of various types and origin could be found. It is also logical to assume that the Rūs/Rus merchants would return to the Russian centers where they had obtained the slaves and furs sold to Islamic merchants in the Volga Bulgar and Khazar markets. It therefore seems unlikely that dirham hoards went directly from Bulgaria on the Volga to Estonia. The dirhams in the Tartu hoard presumably came through a Russian center such as Novgorod or Pskov. The Tartu hoard could well have been composed or altered from coins selected by a merchant in Russia who was visiting Estonia. The choice

[15] Kropotkin, *Klady vizantiiskikh monet*, maps 7–8.

[16] See the map accompanying V. M. Potin, "Topografiia nakhodok zapadnoevropeiskikh monet X–XIII vv. na territorii drevnei Rusi," *Trudy GErmitzah* 9 (1967), pp. 106–94

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of coins under such circumstances may have been arbitrary but it could also have involved a conscious decision about the type of dirhams to be included. In any event, the existence of additional intermediary stops and further handling seems the best present explanation for the differences between the Tartu and northwest Russian hoards. Monetary circulation may have been limited but it does appear to have had some impact in a few cases. The discovery of further Estonian dirham hoards from the 970s should enable us to resolve some of the problems presented by the 1958 Tartu hoard.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

THE COINAGE OF THE MAMLŪK SULTAN BAYBARS I: ADDITIONS AND CORRECTIONS

(PLATE 23)

MICHAEL L. BATES

It is the fate of corpuses, even those as magisterial as Paul Balog's *Coinage of the Mamlūk Sultans of Egypt and Syria*,[1] to begin the process of obsolescence on the day of their publication. One might better say even before publication, for the author himself will inevitably learn of new coins in the interval between the final proofs and the appearance of the work. Once the corpus is in print, collectors, dealers, and scholars immediately begin making special note of specimens "not in Balog." Thus, only six years after his original corpus Balog was able to publish a long article cataloguing "Additions and Corrections" to the work.[2] Of more significance than the mere addition of new varieties, such a corpus (especially in the present state of knowledge of Islamic numismatics and monetary history) stimulates and facilitates further research which can result in wholesale revisions of parts of the work, even though the corpus as a whole must remain the standard reference for generations.

Such a revision is offered by the present study, which attempts to clarify our understanding of the coinage of the great Mamlūk sultan Baybars I (658–76 H./A.D. 1260–77), who is justly described as the founder of the Mamlūk state[3]. In *MSES* the coinage of Baybars seems rather chaotic in comparison with that of other Mamlūks. Indeed, it is

[1] P. Balog, *Coinage of the Mamlūk Sultans of Egypt and Syria*, NS 12 (New York, 1964). Cited hereafter as *MSES*.

[2] P. Balog, "The Coinage of the Mamlūk Sultans: Additions and Corrections," *ANSMN* 16 (1970), pp. 113–71. Cited hereafter as *MSESAdd*.

[3] M. M. Ziyada, "The Mamluk Sultans to 1293," chap. 22 in M. Setton, ed., *A History of the Crusades*, 2: *The Later Crusades, 1189–1311*, ed. R. L. Wolff and H. W. Hazard (Philadelphia, 1962), p. 746.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

an unusually complicated series because of the variety of styles and legends which it displays. Balog classified it by metal, style, reverse legend (that is, with either of two caliphs' names or with religious legend), and Baybars's titulature (with or without the title al-Sulṭān), in that order, and then within these categories by mint and date. At the time, such a procedure was unavoidable, given the many issues of Baybars known only from one or two specimens with illegible date or mint or both.[4] Now, thanks to the sound foundation laid down by Balog and to new discoveries, it is possible to reclassify the coinage to reflect the sequence of events in Baybars's reign and the different succession of issues in each region and mint. The new organization, simpler and more intelligible than that in *MSES*, helps to revise the attribution of some of Baybars's coins and provides some new historical evidence, or at least raises some interesting historical questions.

The first step in reclassification is to separate the issues of the two regions, Egypt and Syria. There are important differences in the numismatic history of these regions under Baybars as under his Ayyūbid and Mamlūk predecessors. Whether or not the coinage of the two regions was made more uniform under the later Mamlūks is a question which further research will need to answer, but the possibility of differences between them is one which ought to be borne in mind in any study of Mamlūk coinage.

The second step is to arrange the issues of each mint in chronological order, so far as possible, using the sequence of historical events as a guide where more than one variety is known with the same date. For the metropolitan mints, Cairo (al-Qāhira) and Damascus (Dimashq), this is easy enough, and a nearly complete sequence can be formed for each. In Egypt, the sequence at Alexandria (al-Iskandariyya) is sufficiently complete to show that that mint conformed closely to the practice at Cairo, except in details of ornamentation, arrangement of legends, and in striking only gold, not silver. In Syria, the known representation of the minor mints Ḥamāh and Aleppo (Ḥalab) is so sparse as to make generalization unwise, but the available evidence from these mints does not display any inconformity with that from Damascus. Possibly there were other Syrian mints, as yet not identified.

[4] See Balog's explanation of his procedure, *MSES*, pp. 2–3.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Certain of Baybars's issues are excluded from the discussion here: his Armenian style coinage (*MSES* 40–41), which deserves a special study in itself when additional examples are found; and his copper, which seldom bears a mint or date and is hardly susceptible to historical and geographical arrangement. The discussion of the coinage as a whole is followed by a catalogue of ANS and other coins not in Balog's corpus and additions.

EGYPT

It is possible to treat the issues of Cairo and Alexandria together. Baybars's Egyptian coinage can be divided into four successive issues.

			MSES nos:			
			al-Qāhira		*al-Iskandariyya*	*Mint Illegible*
	Issue	*Date*	*Æ*	*Æ*	*Æ*	
1.	Ayyūbid style	658 H.		39A		
2.	Mamlūk style,	658 H.		69	27(?)	
	title al-Malik	659 H.		70	28	
3.	al-Sulṭān al-Malik	659 H.				37
	with al-Mustanṣir	660 H.		46		38
4.	al-Sulṭān al-Malik with religious legend	660–76 H.	35–36	72–92	30–33	

Baybars's earliest coinage, in the traditional Ayyūbid style, must have been issued only very briefly; for Baybars came to power on 17 Dhu'l-Qa'da 658,[5] six weeks before the end of the year, and introduced his new style heraldic coinage within that same six weeks. It is probably for that reason that Baybars's Ayyūbid coinage is excessively rare,

[5] Ibn 'Abd al-Ẓāhir, *al-Rawḍ al-ẓāhir fī sīrat al-Malik al-Ẓāhir*, ed. and tr. F. S. Sadeque as *Baybars I of Egypt* (Dacca, 1956), text, pp. 16–17, trans., pp. 96–97; Maqrīzī, *Kitāb al-sulūk li-ma'rifat duwal al-mulūk*, 1, ed. M. M. Ziyāda, 2nd ed. (Cairo, 1956–57), pp. 435–36. At first Baybars took the *laqab* al-Malik al-Qāhir, but only a few days later (Maqrīzī, p. 437) he changed it to al-Malik al-Ẓāhir. Is it possible that any coins were struck with the first title?

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

with only four published specimens from the Cairo mint. This also may well explain why no gold coinage by Baybars in the Ayyūbid style has yet been recorded. The fact is, however, that there is little diference between Baybars's gold coinage in the Mamlūk style and that of his predecessors in the Ayyūbid style, aside from the addition of his heraldic symbol, the lion passant to left. Possibly this symbol was used on his gold coinage from the very beginning. Furthermore, there is a marked stylistic resemblance between Baybars's heraldic gold and and silver coinage, so that one might well say that the introduction of the Mamlūk style consisted mainly in, first, the use of a heraldic symbol on the gold, and secondly, the adoption of the style of the Ayyūbid gold for use on silver issues as well.

The new coinage of Baybars, with his heraldic emblem, is strictly speaking, the first Mamlūk coinage, for the coinage of his predecessors was Ayyūbid in everything but the sovereign's name. That the new style was introduced as early as 658 is demonstrated by only two extant coins, a dirham of Cairo (*MSES* 69) and a dinar of Alexandria (*MSES* 27; but see catalogue below). The Mamlūk style was henceforth characteristic of Baybars's gold and silver coinage; this earliest issue is differentiated by the use of the title al-Malik only (for Baybars had not yet been officially invested with the sultanate) and by the religious legend of the reverse (for there was at this time no ʿAbbāsid caliph[6]). The second issue of Baybars, then, can be assigned to a period beginning sometime in the last six weeks of 658 and lasting until 13 Rajab 659, when Abu'l-Qāsim Aḥmad was invested as caliph.[7] The second issue is distinguished from the fourth, which began in 660 and which also has a religious legend on the reverse, by the absence of the title al-Sulṭān; but this earlier type ought not to be confused with certain issues of the period after 660[8] on which the title al-Sulṭān is omitted merely for lack of space.

[6] The ʿAbbāsid caliphate of Baghdad had been extinguished by the Mongols, and no member of the family was known to have survived until the appearance of al-Amir Abu'l-Qāsim Aḥmad, son of the caliph al-Ẓāhir, in 659.

[7] Ibn ʿAbd al-Ẓāhir, text, p. 35; trans., p. 124; Maqrizi, p. 449.

[8] For example, a fractional dinar, *MSES* 29, of 663 H. and the Aleppo issue described in the catalogue below, no. 49.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The ʿAbbāsid prince Abu'l-Qāsim Aḥmad appeared first in Damascus, with followers who vouched for the authenticity of his descent. Baybars ordered that he be sent on to Cairo, where he arrived 9 Rajab 659. Four days later, at a great assembly, the chief qāḍī, Baybars, and all the notables of the court swore allegiance to Abu'l-Qāsim as the caliph al-Mustanṣir billāh. The caliph then granted authority (*qallada*) to Baybars over all the Islamic lands. Letters were sent out to Muslim rulers instructing them to recognize the new caliph and sultan in the *khuṭba* and to place the two names on their coins.[9]

Given the sequence of events—the accession on the same day of Abu'l-Qāsim as caliph and of Baybars as sultan—it is difficult to explain a recorded issue of this year with the title al-sultan but without the caliph's name. Only one such coin is recorded, although another is falsely so attributed. The latter is a dirham (*MSESAdd* 77A) first published by Bacharach,[10] said to have the date legend *sana tisʿ wa-/ khamsīn / wa-sittami'a.* In reality, the left segment of the marginal legend, which includes the digit, is not visible at all on the coin, being entirely off the flan, and the bottom segment reads *wa-sittīn*, written in the fashion typical of dirhams of 665–69.[11] A second coin, however, is not so easily gainsaid: a dinar, *MSES* 34, pl. 2. Although the coin is ascribed to Cairo, the mint is entirely invisible; but the date 659 is indisputable. One might argue on the evidence of this coin that Baybars's new title was recorded on the coinage before al-Mustanṣir's name began to appear, but this is hardly likely. On the very day of al-Mustanṣir's accession Baybars wrote to other rulers to ask them to acknowledge him as sultan and al-Mustanṣir as caliph on their coins. One must therefore assume that the same orders were given to Baybars's own mints. *MSES* 34 must be regarded as a mule, with the new obverse but with an old reverse die from the period before al-Mustanṣir was recognized.

[9] Ibn ʿAbd al-Ẓāhir, text, p. 36; trans., p. 125; Maqrizi, pp. 448–50. Such coins were struck only by the Atabeg of al-Mawṣil, Ismāʿīl b. Lu'lu', in 659 (İ. and C. Artuk, *İstanbul arkeoloji müzeleri teşhirdeki islâmî sikkeler kataloğu*, 1 [Istanbul, 1971], pp. 415–16, nos. 1274–75) and 660 (W. Tiesenhausen, "Mélanges de numismatique orientale," *RBN* [1875], pp. 356-57, no. 131; in the Hermitage).

[10] J. Bacharach, "A Few Unpublished Mamlūk Dirhems," *ANSMN* 14 (1968), p. 166, no. 4, pl. 24.

[11] See for example, *MSES* 81, pl. 3.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Baybars's third Egyptian issue, then, is that with his title al-Sulṭān al-Malik and with the name of the caliph al-Mustanṣir in the reverse field in place of the *shahāda*. Baybars also acquired the title Qasīm Amīr al-Mu'minīn, which he and his immediate successors placed on the coins.[12] The obverse invocation *bism Allāh al-raḥmān al-raḥīm* is henceforth dropped from the dirhams, probably to provide space for the expansion of the horizontal field legends to include the new titles. This third issue is substantiated from both 659 and 660. Baybars provided al-Mustanṣir with troops and funds to reconquer Iraq, whither the caliph departed in late 659. He met the Mongol army from Baghdad probably on 3 Muḥarram 660 and was either killed in the battle or died of his wounds shortly afterward; in any case, according to Maqrīzī, within the first third of al-Muḥarram.[13] Among those with al-Mustanṣir in the final battle was another ʿAbbāsid, al-Amīr Abu'l-ʿAbbās Aḥmad, who escaped death and arrived at Damascus 12 Ṣafar 660. It would have taken only a few days more for the news of al-Mustanṣir's death to reach Cairo, if it had not already come. This provides a terminus ante quem for the end of Baybars's third issue and the beginning of the fourth.

With al-Mustanṣir's death, the caliphate was again vacant. The Egyptian mints therefore reverted to the use of religious legends in the reverse field and continued to do so until 676 when Baybars died, despite the fact that on 8 Muḥarram 661 the Amīr Abu'l-ʿAbbās Aḥmad was proclaimed caliph, as al-Ḥākim bi-Amr Allāh, in a ceremony in the Cairo citadel. Neither al-Ḥākim nor any of his successors in the caliphate of Cairo were acknowledged on the coinage of Egypt.[14] This is perhaps not too remarkable, considering the insignificance of these figures whose main function was to provide purely formal legitimization for the authority of the sultans; but there has not as yet been any specific explanation of the change in Baybars's attitude toward the caliph which led him to omit al-Ḥākim's name from the coinage, thereby setting the precedent for subsequent sultans. Equally in need of ex-

[12] *MSES*, p. 14.

[13] Maqrizi, p. 467.

[14] The sole exception is al-Musta'in, 815/1412, who appears on the coinage not because he was caliph but because he was temporarily and nominally sultan during an interregnum.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

planation is the surprising fact that Syrian practice differed: al-Ḥākim's name appears on the coinage of all Syrian mints during Baybars's lifetime, at least from 666.

The Cairo dirhams of this fourth issue are divided by Balog into three groups, according to the beginning of the reverse marginal legend (the mint-date formula) at the left side, the right, or at the top. Probably this distinction has no significance, except as a rough chronological guide. Dirhams with the legend beginning at the left were struck 660–63, those with the beginning on the right from 662 to 664, and those with the beginning at the top from 665[15] in every year (except, as so far recorded, 673) until the end of Baybars's reign.

SYRIA

The sequence of issues in Syria differed from that in Egypt. The table here shows only the issues of Damascus; only a few coins are known from other Syrian mints, but their issues seem to follow the same course as those of Damascus. There is also a series of dirhams with no mint name which are probably Syrian.

Issue	*Date*	*MSES* nos. (Damascus Æ only)
1. Ayyūbid style, with Baybars and a local governor	658–59 H.	39
2. Mamlūk style, with title al-Malik only	659 H.	71, 71A
3. al-Sulṭān al-Malik with al-Mustanṣir	659–60 H.	47
lacuna?	660–66 H.	no Syrian coins?
4. al-Sulṭān al-Malik with al-Ḥākim	a) 666–69 H.	56–63 (with month)
	b) 670–76 H.	51–54 (without month)

According to Maqrīzī, Baybars's accession in Dhu'l-Qa'da 658 was accepted by all the amirs except the governor of Damascus, 'Alam

[15] *MSES* 78–80, dirhams of this variety dated 662–64, are to be disregarded; see catalogue below.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

al-Dīn Sanjar al-Ḥalabī.[16] Sanjar claimed authority for himself[17] and adopted the title al-Malik al-Mujāhid. Still, he does not seem at first to have completely rejected Baybars's authority, but rather only asserted autonomy for himself in his own domain while recognizing the nominal sovereignty of Baybars; for in the *khuṭba*, Maqrīzī says, the name of Baybars was mentioned first followed by Sanjar, and coins were struck bearing both their names. Later, however, Sanjar expanded his claim to include the sultanate, but Maqrīzī does not say whether he ever struck coins with his name alone.

A coin such as that mentioned by Maqrīzī has been known since the publication of *MSES*, but until recently it has not been correctly read. On the hitherto unique example, a dirham of Ayyūbid style in the Ashmolean Museum, Baybars's name on the obverse and Sanjar's title al-Mujāhid on the reverse are entirely obliterated, and only the first letter of Sanjar's name is visible.[18] It will be noted that this first letter, *sīn*, very much resembles the first letters of Baybars's name, leading Balog to assume that Baybars was named on both sides of the coin and that ʿAlam al-Dīn was used as an additional title by Baybars in the early days of his reign.

A second example of this issue has recently been discovered by Ariel Berman in a Jerusalem hoard.[19] The legends (see catalogue below, no. 39) are as would be expected from Maqrīzī's statement, with Baybars's name and full title on one side and Sanjar's on the other. According to Berman, his coin bears the digit *tisʿ*, nine (not legible in the illustration), so the coin must have been struck in the six weeks of that year before 11 Ṣafar 659, when a force loyal to Baybars occupied

[16] Maqrizi, p. 438. Sanjar's full name and *laqab* are given on p. 433 and again on p. 439.

[17] The phrase used by Maqrizi is *daʿā li-nafsihi*, a phrase more commonly employed for a claim to the imamate but in this context, clearly, implying a much lesser assertion.

[18] *MSES* 39; a fuller description and illustration are provided in *MSESAdd* under the same number (p. 117, pl. 28). The other two dirhams mentioned by Balog under this number are in fact like *MSESAdd* 39A, of Cairo. See catalogue below.

[19] A. Berman, "The Turbulent Events in Syria in 658–59 H./1260 A.D. Reflected by Three Hitherto Unpublished Dirhams," *NCirc* 84 (1976), pp. 315-16, no. 3. A full description of the coin is provided in the catalogue below.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Damascus;[20] but such coins were no doubt also struck in 658. Inasmuch as Maqrīzī says that Sanjar's coinage also bore the name of Baybars, there is no reason to believe, as Berman suggests, that the issue was produced during the period of reconciliation between the two which followed not long after Sanjar's arrest.

A second discovery by Berman provides new evidence for the political situation elsewhere in Syria at the accession of Baybars. The coin in question is a dirham of Ayyūbid style, much like the coins of Sanjar, with Baybars's name and titles on one side and those of al-Manṣūr Muḥammad, the Ayyūbid ruler of Ḥamāh, on the other.[21] According to certain historians, Sanjar called upon the Ayyūbid rulers of Ḥamāh and Ḥimṣ to recognize him as sultan, but they refused and remained loyal to Baybars.[22] This new dirham shows that at Ḥamāh, at least, the situation was more complicated. Al-Manṣūr Muḥammad may not have recognized Sanjar as sultan, but he evidently took a position with regard to Baybars very similar to that initially taken by Sanjar, acknowledging Baybars's nominal supremacy but asserting his autonomy in his own territory. Such a position would be natural for al-Manṣūr, who had governed Ḥamāh since 642 as a subordinate to various members of his own family and had been restored by Quṭuz to his position in Ḥamāh after the Mongol occupation of the city in 658. It is not clear whether his issuance of coinage with his own name at Baybars's accession indicates an assertion of increased independence. His presently known silver coinage at Ḥamāh in the Ayyūbid period never bears his own name, but only that of his sovereigns.[23] However, no coins of Ḥamāh from 655

[20] Maqrīzī, p. 444.

[21] Berman, p. 315, no. 2; see catalogue below, no. 39M.

[22] Sadeque, in her introduction to Ibn ʿAbd al-Ẓāhir, p. 42, citing Abu'l-Fiḍā'.

[23] A coin attributed to this ruler by Lavoix and Casanova (H. Lavoix, *Catalogue des monnaies musulmanes de la Bibliothèque Nationale: Égypte et Syrie*, rev. P. Casanova [Paris, 1896], p. 270, no. 698, pl. 6) is wrongly attributed; it is clearly a Mamlūk coin, probably of Qalā'ūn, and therefore to be dated 6(8)5, not 650. Because the coin bears the titles al-Manṣūr Sayf...al-Dīn, Lavoix or Casanova erroneously assigned the title Sayf al-Dīn to al-Manṣūr of Ḥamāh, and this has been repeated in such standard references as E. de Zambaur, *Manuel de genealogie et de chronologie pour l'histoire de l'Islam* (Hanover, 1927), p. 98. The correct title is Nāṣir al-Dīn, as shown by Berman's coin and by Maqrīzī, p. 318. Another coin attributed to al-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

to the Mongol occupation of the city in 658 are as yet known; coins were struck there under the Mongols, but no coins are known of the period immediately after al-Manṣūr was restored to the city by Quṭuz. One cannot, therefore, say whether al-Manṣūr placed his name on the coinage before his issue with Baybars's name. Similarly, it is not possible to say with certainty when this latter issue came to an end, for the next known issue of Ḥamāh, an ordinary Mamlūk dirham with Baybars and al-Mustanṣir only, is dated 660. The historians say nothing about the imposition of Baybars's authority in Ḥamāh, suggesting that al-Manṣūr at some point accepted the situation without resistance. In late 659 he paid homage in person to Baybars in Damascus and was confirmed in his position, which he retained until his death in 683.[24] One can therefore only say that the issue in question began almost certainly in 658 and possibly continued into 659. It perhaps ended at about the same time that Baybars's authority was established in Damascus.[25]

With the installation of Baybars's authority, the Damascus mint began striking his new Mamlūk coinage, with the title al-Malik and religious legends in the reverse field. Then, sometime in the seventh month of 659, the Damascus mint responded to the accession of al-Mustanṣir and the investiture of Baybars as sultan, by striking coins

---

Manṣūr Muḥammad is a copper fals, *BMCOriental* 4, Suppl. 468c, p. 230, bearing on one side al-Malik al-Manṣūr and on the other al-Malik al-Nāṣir, which is probably the same coin illustrated by W. Marsden, *Numismata Orientalia Illustrata*, 1 (London, 1823), pl. 13, no. 237, attributed by him to al-Manṣūr Muḥammad I. Stephen Album has recently pointed out to the author the existence of two other copper issues, apparently unpublished, bearing the names al-Malik al-Manṣūr on one side and al-Malik al-Ṣāliḥ on the other. On one issue, the names are enclosed in a beaded square within a tangent beaded circle; on the other, the names are within a triple hexagram of the familiar Aleppo Ayyūbid style. As Album suggests, these coppers also are most probably to be regarded as issues of al-Manṣūr in Ḥamāh, acknowledging the sovereignty of the Ayyūbid al-Ṣāliḥ Ayyūb (d. 647/1249). One example of each issue has been donated to the ANS by Album.

[24] Ibn ʿAbd al-Ẓāhir, text, p. 45; trans., p. 138; Maqrizi, pp. 460, 462.

[25] Berman assigns the date 659 to his specimen, arguing that the issue was probably struck after a brief reconquest of Ḥamāh by the Mongols at the very end of 658 and beginning of 659. However, the Mongols did not take Ḥamāh at this time; they only beseiged it (Maqrizi, p. 442). In any case, the coin could have been struck before the Mongols arrived as well as afterward.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

like those of the third Egyptian issue. The unique example of this issue with the mint Dimashq bears no legible date and may have been struck in 659 or early in 660; a dirham of Ḥamāh (*MSES* 48) confirms that such dirhams were still being struck in Syria in the first six weeks of the latter year.

Since al-Mustanṣir was killed in early 660, leaving the caliphate vacant for about a year, one would expect Damascus to have issued coins like the fourth Egyptian issue, with the title al-Sulṭān al-Malik combined with the reverse religious legend; but no Syrian dirhams of this type are recorded.[26] Indeed, no Syrian dirhams are recorded for nearly seven years, from early 660 (the latest possible date for the third issue, with al-Mustanṣir) to late in 666 (the earliest known coin of the fourth Syrian issue is dated Dhu'l-Qa'da, the eleventh month, 666). There is no obvious explanation for this lacuna in the series, which seems unlikely to be the result of chance.

When minting of dirhams was resumed in Damascus, the type issued there differed from that standard in Egypt in having the name of the caliph al-Ḥākim on the reverse. Why al-Ḥākim was recognized on the coinage of Syria and not that of Egypt is perplexing. At Damascus, this fourth Syrian issue is divided into two subseries. The first, with dates from 666 to 669,[27] has the honorific *al-maḥrūsa* following the mint-name, and is dated by month as well as by year. Coins of this subseries are not rare, but few are fully legible, so that there has been recorded at present only one example of each of eight month-year combinations. Future discoveries may help to clarify whether we can expect eventually to record every month in each year, or whether mint activity was intermittent.

[26] There is, however, a copper issue of Damascus with the title al-sultan and the *shahāda* on the reverse, dated xx1 (*MSES* 100; *MSES* 98–99 are not from Damascus, as Balog noted in *MSESAdd*, p. 130). There are also copper issues, *MSES* 96 and 97, with the caliph al-Ḥākim. It seems reasonable to assign these latter to the period when dirhams with al-Ḥākim were struck, that is, 666–76, on which assumption *MSES* 100 would more probably be 661, not 671. If so, it would appear that al-Ḥākim was at first not recognized on the coinage of Syria, just as in Egypt; for he was caliph during all but the first two days of 661.

[27] The date 674 assigned to a coin of this variety (*MSES* 63) is incorrect; the coin is dated 667. See catalogue below, no. 58M.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The second subseries lacks both the mint honorific and the month, but is otherwise similar to the first. It spans the years 670–76, although 671 and 672 have not yet been recorded, and 676 is known only through coins with the digit alone visible. When Baybars died (28 Muḥarram 676) the caliph's name was dropped from the reverse on his son's coinage, and replaced by religious legends.

Of the two other Syrian mints recorded, Ḥamāh and Aleppo (Ḥalab) only Ḥamāh seems to have had any importance. From it there is now recorded the issue of al-Manṣūr Muḥammad with Baybars, discussed above; a dirham of 660 (*MSES* 48) which is similar to the third Damascus type, with the caliph al-Mustanṣir; and coins of 666-74 which parallel the fourth Damascus type, with al-Ḥākim. There is then no distinction to be made between the coinage of Ḥamāh and that of the Syrian capital, except that Ḥamāh issues do not have the mint-date formula in a circular marginal legend, but rather in horizontal lines above and below the reverse field. The attribution of one coin, *MSES* 67, to Ḥamāh is dubious (see below and the catalogue).

Aleppo is sparsely represented. One issue, known from two examples only (see catalogue below, no. 49), corresponds to the fourth issue of Damascus, with the caliph al-Ḥākim, but Baybars's title is al-Malik only, without al-Sulṭān. This, no doubt, is an abbreviation for lack of space, for this Aleppo issue is distinguished by an unusually broad border, consisting of a linear octalobe surrounded by an octalobe of dots; a circular marginal legend; and outer linear and dotted circles. As a result, the space remaining for the central field legend is rather limited. No date is legible on the coins, but there is no objection to making the issue contemporary with the fourth Damascus issue, that is, some time in the period 666–76; the Aleppo coins could, however, have been issued as early as 661, when al-Ḥākim was installed as caliph. A third Aleppo coin, tentatively assigned to 675, is mentioned by Mayer.[28] It is said to be like the last issue of Damascus, with the caliph al-Ḥākim.

Ḥarrān may tentatively be proposed as a third Syrian mint. At least that name seems to fit better the visible portion of the mint on *MSES* 67, which Balog ascribed to Ḥamāh. The arrangement of the

[28] L. A. Mayer, "A Hoard of Mamluk Coins," *QDAP* 3 (1934), p. 169, no. 7a.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

legends on the coin is atypical of Ḥamāh and similar to that of Damascus; but the mint name is definitely not Dimashq.

DIRHAMS WITHOUT MINT OR DATE

Another group of issues which are most probably to be assigned to Syria are the dirhams and half-dirhams which bear no mint name or date. These coins may be arranged in the following chronological order:

1. *MSES* 68, a unique half-dirham without the title al-Sulṭān and with the religious legend in the reverse field. Note that the lion is full-face, a feature which Bacharach[29] has observed as a characteristic of Damascus but which is also found on Ḥamāh issues; it is at any rate typically Syrian rather than Egyptian. There is no corresponding dirham issue with no mint name and with religious legends. Therefore this half-dirham might equally well be assigned to a later period, for the absence of the title al-Sulṭān is no guide to the dating of half-dirhams, as shown by *MSES* 43 and 50 (of issues 2 and 4 below).

2. *MSES* 42, dirhams without the title al-Sulṭān but with the caliph al-Mustanṣir in the reverse field, and a corresponding half-dirham issue, *MSES* 43 and 43A. One of the latter has the lion facing right, a feature otherwise known only on a dirham attributed to Ḥamāh (*MSESAdd* 66A).

3. *MSES* 44, dirhams with the titulature "al-Sulṭān... Qasīm Amīr al-Mu'minīn" and on the reverse the caliph al-Mustanṣir; one of these (see catalogue below) has, clearly, the lion full-face. *MSES* 45 is the corresponding half-dirham issue.

4. *MSESAdd* 49A, a dirham with the same titulature as *MSES* 44 but with the caliph al-Ḥākim; the lion is full-face. The analogous half-dirham type is *MSES* 50, which, however, lacks the title al-Sulṭān.

Issues 1, 3, and 4 without mint may be regarded as the analogues of Damascene issues 2, 3, and 4 respectively. Issue 2, which anachronistically has Baybars with the title al-Malik only, but with the caliph al-

[29] Bacharach, p. 167.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Mustanṣir, can most plausibly be explained by the careless reuse of old obverse dies with new reverses.

If these issues were known from half-dirhams only, no problem would be raised, for it is easy to imagine that the die cutters would have omitted the mint and date from these little dies for lack of room (which would also explain the prevalent omission of the title al-Sulṭān). The half-dirhams could then be regarded as products of the Damascus or Ḥamāh mints. It is more difficult, however, to fit the dirhams into a relevant context. Are they to be regarded as the product of an otherwise unrepresented mint, perhaps of a mobile camp mint which accompanied Baybars in his Syrian campaigns? Or are they merely anomalous issues of Damascus or Ḥamāh, possibly in part from the period from early 660 to late 666 which is not represented by dated coins? Perhaps a closer study of details of epigraphical style and ornamentation, or the discovery of a die link between the mintless issues and the corresponding issues with mint name, will solve the problem.

CATALOGUE

The catalogue which follows lists a number of unpublished coins in the ANS collection and, for the sake of completeness, some coins which have been published elsewhere since the appearance of *MSESAdd* or which were overlooked by Balog. Coins which merely duplicate those already catalogued by Balog are generally omitted here, aside from certain rarities. For example, the ANS has 114 Cairo dirhams and halves (including those mentioned by Balog), 29 of Damascus, and 17 of Ḥamāh, but most of these do not add to our knowledge except as material for studies of metrology, fineness, or die linkage, all of which lie outside the scope of the present article. A comparison of the ANS coins to their descriptions by Balog has revealed some minor errors of detail, which are corrected, and some ANS coins mentioned by Balog are here illustrated for the first time.

It seems more convenient to follow Balog's classification and enumeration of the issues than to attempt to reassign catalogue numbers to the entire body of Baybars's coinage. Whereas Balog, in *MSESAdd*, assigned to new varieties a number followed by capital A, new varieties in this listing have been given a number followed by M (or, in two in-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

stances, K and P). This will help to distinguish citations of this listing from citations of Balog's corpus and its supplement, and also leaves the letters preceding and following M available for enumeration of new varieties in their proper sequence in future publications. Balog's precedent in designating the side of the coin with the ruler's name as the obverse has also been followed. Those coins marked by an asterisk (*) are illustrated.

27. AL-ISKANDARIYYA, 658. It should be noted that the sole coin cited to substantiate this date-mint combination is Karabacek no. 909,[30] which in the latter publication is listed with a query after the date and is compared with *Khediv.* 1470,[31] a dinar of 661 or 671 with the title "al-Sulṭān." So the existence of an Alexandria issue of Baybars in this year must remain somewhat problematic.

28. AL-ISKANDARIYYA, 659. Of the three coins cited by Balog under this number, two (his own, illustrated *MSES*, pl. 2, and the ANS example) have no visible mint name. The entry is supported only by the British Museum example (*BMCOriental* 4, no. 473). *MSES* does not note that the ANS coin is pierced.

30. AL-ISKANDARIYYA, 661. The ANS coin is pierced.

34. Mint illegible, 659. Although this unique coin is listed under Cairo, the mint is completely off flan; see *MSES*, pl. 2.

35. AL-QĀHIRA, 660. A third example of this issue was acquired by the ANS in 1965 (5.854 g; 25 mm); the mint and date are completely legible.

36K. AL-QĀHIRA, 667. A dinar of this mint and date has been published by Ilisch.[32] Like *MSES* 31 (see corrected description, *MSES Add*, p. 117), of the same year but from Alexandria, the coin has the mint at the top of the reverse field as well as in the margin.

36P. AL-QĀHIRA, 359 or 360. None of the three examples of Egyptian issue 3 listed by Balog, *MSES* 37-38, bears a mint name; but Karabacek

[30] J. Schulman (18 November 1907).

[31] S. Lane-Poole, *Catalogue of the Collection of Arabic Coins Preserved in the Khedivial Library in Cairo* (London, 1897).

[32] L. Ilisch, "Beiträge zur mamlukischen Numismatik," *Münstersche Numismatische Zeitung* (in Holger Dombrowski Münzenhandlung Lagerkatalog 65/66 [November 1975]), pp. 5–6, no. 1, pl. 1.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

910, illustrated in that publication, pl. 2, is of that issue and has the mint name al-Qāhira, although the date is not legible.

38. (Egypt), 360. The Paris dinar cited under *MSES* 38 with the date 66x must, of course, be dated 660, for it was in that year that al-Mustanṣir died; also, the word *hijriyya* added to the end of the date formula is probably there to take up the space left by the absence of a digit, as on the later dinars of that same year (*MSES* 35) and the dirhams of 670 (below, *MSES* 86). The ANS dinar cited under this number has no portion of the date visible. Another dinar of this issue, also with neither mint nor date visible, was published in the Artuk, *Istanbul kataloğu*, no. 797, pl. 28.

39. The correct version of the legends on this Ayyūbid style dirham of Damascus, as shown by Berman's newly discovered example (see note 19; 2.78 g; 20 mm), is:

Obv.: الملك الظاهر
ركن الدنيا
والدين ببرس

Rev.: الملك المجاهد
علم الدنيا و
الدين سنجر

margin:

L T R

/[لا اله ا]/[لا الله]/محمد رسو/ل الله/ضر ب بد/مشق سنة/تسع و[خمسين]

margin:

L T R B

/[لا اله ا]/[لا الله]/محمد رسو/ل الله/ضر ب بد/مشق سنة/تسع و[خمسين]

B

/وستماية

Berman argues that this coin may indicate a legitimate sharing of power between Baybars and Sanjar, and that it was therefore struck after Sanjar's "independent" coinage; but Maqrīzī's statement shows that Sanjar's coinage from the beginning of his rebellion bore both names. If Sanjar ever struck coins with his name only, these would have come later, when, according to Maqrīzī, he expanded his claim to include the sultanate. However, Berman's coin, if the date is correctly read (65)9 (it cannot be confirmed from the illustration), indicates that Sanjar probably never dropped Baybars's name from the coinage, for he held power in Damascus only a short time at the beginning of that year. Sanjar's issue differs from the ordinary square-in-circle Ayyūbid and Mamlūk issues in having the linear square border outside the square

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of dots; usually the dots are outside. The Ashmolean and Jerusalem specimens were struck from different obverse and reverse dies.

The two dirhams mentioned by Mayer which are cited under this number in *MSES* and *MSESAdd* ought rather to be assigned to the number 39A (that is, to Cairo); for Mayer says that the reverse of his coins bore the "Apostolic Mission."

39M. The coin published by Berman with the names of al-Manṣūr Muḥammad and Baybars (see note 21; 2.85 g; 20 mm) has legends as follows:

Obv.: الملك الظاهر
ركن الدنيا
والدين [بيبرس]
margin:
R B L T
/وستماية/...../..../...../

Rev.: الملك المنصور
ناصر الدنيا
والدين محمد
margin:
R B L T
/لا اله ا/لا الله/...../..../

The mint, as Berman suggests, is almost certainly Ḥamāh; the date, as argued above, could be either 658 or 659. Berman suggests also that the reverse of this coin was struck from an old obverse die used for al-Manṣūr's "independent" coinage, with the margins recut to replace the mint-date formula which would have been on the original obverse with the *shahāda* appropriate for the new reverse. He bases this argument on the assertion that the obverse and reverse were not cut by the same engraver, and the fact that the new reverse marginal legend is in part defective, in the top segment. The argument is rather weak. No "independent" coinage of al-Manṣūr is known; on the contrary, the silver coinage of Ḥamāh of the late 640s and early 650s, up to 655, is all struck in the name of one or another Ayyūbid, never with the name of al-Manṣūr (see note 23). Al-Manṣūr was in fact never really independent; if coins of Ḥamāh between the last Ayyūbid issue of 655 and the Mongol issue of 658 turn up, they will very probably bear the name of al-Nāṣir Yūsuf, like the coins of 655. If any coins were struck after the Mongols were driven out of the city by Quṭuz, they would probably have borne that Mamlūk's name, either alone or with al-Manṣūr. In the latter case, a reverse with al-Manṣūr's name could have been reused for the issue with Baybars, but there would have been no need to recut the die.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Whether the dies for the two sides of the coin were struck by two different engravers is not evident, although possible; Berman must have had in mind the fact that the lettering of the obverse is rather thick in comparison to that of the reverse. Otherwise, the epigraphy of both sides is the usual mid-thirteenth-century Syrian Ayyūbid style. As for the inscription of the top reverse marginal segment, it is not defective; rather it is engraved in a fashion frequently encountered on thirteenth-century Syrian dirhams: the letter *hā'* of *ilāh* is formed as an undulating curve, with a break at the highest point of the curve which causes the end of the letter to appear to be a separate letter, something like *rā'*. Whether or not the die was reused from a hypothetical earlier issue, there is no evidence that it was recut.

43. Without mint name or date. The ANS example of this half-dirham issue varies slightly from the two examples illustrated in *MSES*, pl. 3, in having the *alif* of al-Ẓāhir at the end of the first line, like *MSES* 68. The lion to left was inadvertently omitted from the description of this issue in *MSES*.

***44.** Without mint name or date. A new ANS example of this dirham (2.75 g; 22 mm) shows the lion clearly full-face, a characteristic of Syrian issues.

46. AL-QĀHIRA, 660. Two specimens in the ANS have the word *amīr* below, not at the end of, the last line of the reverse, and have no marginal legend at the bottom of the field; on both, the mint name al-Qāhira is visible. It should be noted that several of the specimens cited in *MSES* under this number have no legible date and could as well be 659 as 660.

***47.** DIMASHQ, 659 or 660. The unique Paris dirham cited under this number in *MSES* has the word *amīr* below the reverse field, like certain Cairo dirhams just described. An ANS dirham (2.73 g; 23 mm) also has this feature, and in addition has the mint formula beginning on the right side, not the left. The mint is not visible, but the full-face lion on the obverse suggests Damascus. In sum, the dirham is probably a duplicate of the Paris coin, for the original catalogue description of the latter does not say, as Balog does, that the mint formula begins on the left.

***49.** ḤALAB, date missing. The only example of this issue cited by Balog, an ANS dirham, has no trace of marginal legends, but a second

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

example acquired by the ANS since Balog wrote (2.30 g; 22 mm) shows the mint name Ḥalab, Aleppo, in the obverse margin followed by uncertain letters which may be the beginning of *al-maḥrūsa*; on the reverse the words *lā ilāh illā Allāh* are visible.

50. Without mint or date. The ANS half-dirham mentioned under this number differs from the general description in having the obverse marginal legend begin at the top, like the half-dirhams *MSES* 43 and 68.

53. DIMASHQ, 674. Balog lists only one dirham under this number, but the ANS dirham (3.01 g; 22 mm) listed under number 54a is no doubt also of this year.

54M. DIMASHQ, 676. Although no dirham of this year with a fully legible date has been recorded, the coins with only the digit six legible, under number 54a, are no doubt of this year.

***58M.** DIMASHQ, DHU'L-ḤIJJA 667. The ANS dirham to which Balog assigned the number 63 should instead be given this number to put it in its proper place in the sequence; for a reexamination of the coin shows in the margin at bottom and right the words *. . . ja sana sabʿ wa-/ sittīn wa- . . .*, that is, Dhuʾl-Ḥijja 667. The digit could as well be read *tisʿ*, nine, but the point visible below it is probably sufficient evidence for the reading suggested here. An extraneous mark above the decade misleadingly suggests the reading *sabʿīn*. The coin is pierced.

63. To be deleted; see no. 58M above.

63M. ḤALAB, 675. Mayer mentions a dirham of this mint and, tentatively, this date, which is not recorded by Balog, perhaps because the description can no longer be confirmed. If Mayer's information is correct, the coin was similar to the Damascus issues of the same period.

64. ḤAMĀH, 666. On the ANS coin (2.82 g; 23 mm) which uniquely supports this mint and date, the mint name is not visible, although the attribution is no doubt correct. The description given for *MSES* 64 must be a composite from nos. 64-66 and 66a. Note the correction made by Balog, *MSESAdd*, p. 119: Aḥmad, not *bn*, in the third line of the reverse. According to Balog, who follows Lane-Poole on this, the caliph's title on these coins is al-Ḥākim billāh instead of the correct al-Ḥākim bi-Amr Allāh. In fact, on the ANS coin (*MSES* 64) only the first two letters, *bāʾ-alif*, of the termination are visible, permitting no conclusion on the reading. On neither of the two Paris specimens which

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

support *MSES* 65 is the caliph's title visible, judging by Lavoix's description. On the British Museum dirham under *MSES* 66 (*BMC Oriental* 4, no. 482, pl. 6), one can read either form of the title, despite Lane-Poole's categorical assertion that the title is *billāh*. Of the 17 ANS dirhams of this issue, only 2 show this portion of the title; on both it is *bi-Amr Allāh*. An examination of the illustrated coin (no. 66a; 3.30 g; 22 mm) will show that the *alif* of *Allāh* is written directly above and almost touching the *mīm* of *bi-Amr*. If these words are only faintly visible, as on the British Museum dirham, it is easy to imagine that one could read *billāh*; but when the title is fully visible it is always *bi-Amr Allāh*.

65K. ḤAMĀH, (66)9. Mayer[33] mentions a coin of this mint with the digit *tisʿ* visible. Although he also says the mint-date formula was in the margin, which does not accord with his ascription to Ḥamāh, it is more likely that he was mistaken as to the margin than in reading the mint.

***65P**. ḤAMĀH, (67)1. The ANS has a coin, similar to *MSES* 64-66, with the digit *aḥad* visible (2.72 g; 23 mm). Another was mentioned by Mayer, with no. 65K above.

66M. ḤAMĀH, (67)4. A dirham with the digit *arbaʿ* is mentioned by Mayer.[34] In this instance the coin is said to have the mint and date below the field.

***67**. ḤARRĀN (?), date missing. Balog read Ḥamāh on the unique ANS coin of this issue (illustrated here for the first time, 2.88 g; 21 mm), but the small visible portion of the mint name does not support this reading very well. Moreover, the coin differs from all other securely recorded issues of Ḥamāh in having the mint-date formula in the margin, not above and below the reverse field legends. Ḥarrān is very tentatively proposed. In the description in *MSES*, the name Aḥmad should be added at the end of the third line of the reverse field.

***68**. Without mint or date. This unique ANS half-dirham has the full-face lion characteristic of Syria.

[33] Mayer, p. 169, no. 7b.
[34] Mayer, p. 168, no. 3.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

77A. "AL-QĀHIRA, 659." The unique dirham published by Bacharach and recorded in *MSESAdd* under this number is to be reassigned to the period 665-69, as argued above, p. 165.

78–80. "AL-QĀHIRA, 662–64." These entries should be deleted from the corpus. They are supported only by dates listed by Mayer,[35] but in fact Mayer's description is deliberately ambiguous so as to apply to all Cairo dirhams of 660–76: He does not indicate where the marginal legend begins, and says that some of the dirhams listed under his description have the words "*dīn al-ḥaqq*" (like *MSES* 72–77) and some do not (like *MSES* 78–92). Thus Mayer's dirhams of 662 could be, and probably were, like *MSES* 75; those of 663 should be assigned to *MSES* 74 or 76, and those of 664 to *MSES* 77. The deletion of *MSES* 78–80 eliminates the chronological overlap of Balog's variety C with the two earlier varieties.

86. AL-QĀHIRA, 670. The ANS owns two dirhams with this date followed by the word *hijriyya*. Probably all dirhams with this word at the right, like *MSES* 92, should be assigned to this year. See the dinars of 660, above, no. 38.

92. Missing date, with *hijriyya*: To be deleted as suggested above, no. 86. Dirhams with *hijriyya* cannot be assigned to 660, for in that year the arrangement of the marginal legend was different.

95. No mint or date. As may be seen on *MSES*, pl. 4, Baybars's heraldic lion should appear in the description below the obverse field legends.

98. Mint and date missing, if any. Balog's description omits the words Rukn al-Dīn which are found in the triangles to left and right of the central cartouche. As he noted in *MSESAdd*, the attribution of this issue and *MSES* 99 to Damascus is unfounded.

***102M**. No mint or date. The ANS owns yet another variant of the type represented by *MSES* 101, 102, and 102A which is like 102 except in having the name Baybars at the end of the third line on the reverse. The name is spelled with *alif*, *BĀBRS*, instead of the usual *BBRS* found on all other coins of Baybars (1.91 g; 17 mm).

[35] Mayer, p. 170, no. 9.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

NEW CONSIDERATIONS ON MAMLŪK HERALDRY

PAUL BALOG

When my book on the coinage of the Mamlūk sultans of Egypt and Syria appeared,[1] I was under the impression that Mamlūk heraldry was, to a large extent, governed by rigid rules in the same way as European heraldry, which must have inspired it. I naturally profited by the extensive information in L. A. Mayer's *Saracenic Heraldry*.[2] The oldest known Muslim blazon is probably the fleur-de-lis carved in stone in the Damascus māristān built by Maḥmūd b. Zangi in A.D. 1154, when the Muslims had already been in contact with the Crusaders for 50-odd years; it is a faithful replica of a European heraldic fleur-de-lis.[3]

The armorial roll of Mamlūk amīrs in Mayer's work is based on blazons from buildings, such as mosques, madrasas, mausoleums, cenotaphs, castles and palaces; and from glass objects such as mosque lamps, flasks, bottles, and vases; and from such metal objects as chandeliers, candlesticks, basins, plates, dishes, pen boxes, chamfrons (headpieces of horse armor), and doorfittings. Blazons can be found carved in or painted on woodwork, woven into textiles, and on thousands of pottery fragments. The latter are seldom of any use, however, as they are rarely accompanied by identifying legends. Mayer also included a few copper coins with blazons of six Mamlūk sultans in his armorial roll.

As I had a large quantity of coins at my disposal while writing my book on Mamlūk coinage it seemed useful to continue the study of the heraldry of their sultans, which was barely approached by Mayer, and include the result in the book. Since then, my prolonged work with

[1] P. Balog, *Coinage of the Mamlūk Sultans of Egypt and Syria*, NS 12 (New York, 1964) (hereafter cited as *MSES*); "The Coinage of the Mamlūk Sultans: Additions and Corrections," *ANSMN* 16 (1970), pp. 113–72 (hereafter cited as *MSESAdd*).

[2] L. A. Mayer, *Saracenic Heraldry* (Oxford, 1933).

[3] Mayer, pp. 22, 152, pl. 19, 1.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Mamlūk coinage has resulted in changes in my ideas on the nature and aspects of the Mamlūk nobility, their rules and usages, and their attitude toward the blazon. I have also realized that heraldic figures on the coins had to be considered more cautiously, with a different point of view from that used in judging a European coat of arms. However, I am still firmly convinced that the figures are all intended to represent the sultan on whose coins they are engraved.

The personal objects on which the owner's blazon was engraved or depicted were always under the eyes of the proprietor. We can therefore assume that the coat of arms was executed exactly and faithfully according to the original model. But personal objects, and even tombs, are seen by few people, while a mosque or other public building has an official character. Therefore, the blazons on public buildings should more reliably be of correct design.

Official written documents on which the blazon of the appointee may have been depicted, such as firmans, and appointments to court office, governorship or an even higher office, no longer exist. It is on coins that we have the most official and widely-advertised documents of sultanic authority which reached the eyes of the entire population. I believe that, in consequence, the blazons on Mamlūk coins can be relied on as official emblems of the sovereign who had them struck. Copper coins are not manufactured with the greatest care, but even when their execution is inartistic or outright careless, I am convinced that they bear one or another of the devices adopted by the sultan. Puzzling details remain, like the seeming irregular multiplicity of the emblems for a sultan but Muslim heraldry is not based on rules as rigid as those of its European counterpart, a point which will be considered below.

In a paper published in 1970, J. W. Allan criticized my views on Mamlūk heraldry.[4] Stimulated by his objections and conclusions, I took up an extended study not only of the coinage, but also of the literature touching upon the subject of Islamic blazons. Mediaeval Arabic literature concerning heraldry is, however, scanty and descriptions of blazons are either non-existent or unsatisfactory. Only Abū'l-Fidā presents use-

[4] J. W. Allan, "Mamluk Sultanic Heraldry and the Numismatic Evidence: A Reinterpretation," *JRAS* 2 (1970), pp. 19–112.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ful notes on court offices and the heraldic signs which represent them on the blazon. Mayer remarks briefly on what he believes to be the oldest Saracen blazons, but his sources are not always reliable. The fleur-de-lis already mentioned is the oldest existing Islamic blazon. Other emblems, in the main mosque at Ḥimṣ and attributed by Mayer to the same sultan, are much later, while the only authentic Ayyūbid blazon is on the Ḥarrān gate of Urfa, built by al-Muẓaffar Ghāzi b. al-ʿĀdil I. According to Mayer, the rosette is the oldest Ayyūbid heraldic device, and is found in the north tower of Qalʿāt al-Mudīq, but it seems to me to be only an ornament, not a blazon. Although the coat of arms of Abū'l-Fidā and his grandson, ʿAlī b. ʿImād al-Dīn, are true Ayyūbid family shields, they should be relegated to the Mamlūk period. As they are absolutely different from the only authentic Ayyūbid blazon from the time when the Ayyūbids ruled, the latter belonged to the prince of Mayāfārigīn, al-Muẓaffar Ghāzī and consisted of a walking lion facing a man. When comparing the various blazons of the Ayyūbids with each other, the question arises to what extent they can be considered true family blazons. Finally, the copper coin with heraldic fleur-de-lis which Lane Poole attributed to al-Ẓāhir Ghāzi of Aleppo and I proved to belong to the Circassian sultan al-Ẓāhir Barqūq,[5] has been transferred to his issues by the British Museum keeper, N. M. Lowick.

Mayer's armorial roll contains the names of 243 amīrs, the description of almost all their blazons, and as complete biographical details as possible. Although in a few cases there is no information other than the amīr's name, Mayer stresses the importance of historical and biographical inscriptions accompanying the blazons. The number of devices contained in the 243 shields, either composite or simple blazons, or even without a shield (a usage accepted in Saracen heraldry), are as follows: cup or chalice, 128; *buqja* (napkin), 89; pen box, 88; horns or trousers of nobility, 43; scimitar, 15; fleur-de-lis, 12; rosette, 10; fesse, 7; eagle, 7; polo sticks, 6; *khānjā* (table), 4; bends, 3; lion, crescent (horseshoe?), crossbow, ceremonial saddle and shield with lower part bendy, 2 each; keys and palmette, 1 each; and various emblems resembling tamghas, 13.

Before reviewing Allan's comments on the heraldic devices on *MSES* coins and his opinion about their heraldic value, it may be useful to

[5] *BMCOriental* 4, no. 321; *MSES* 603.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

consider an aspect not analyzed in Mayer or elsewhere. (The coins of the six sultans incorporated into Mayer are excluded from the following evaluation.) The majority of Mamlūk amīrs had a clear preference for composite blazons: about 70 percent of the coats of arms are composed of several devices, and only 30 percent are simple emblems. The three-fielded shield without inscription or device, which according to Mayer and Allan represents the fesse, occurs on only seven blazons, five percent of the 154 three-fielded shields which include additional charges in one or more segments. Moreover, the seven shields with plain fesse are only three percent of the 243 amīral blazons in Mayer's armorial roll, an indication that the low-ranking office of the royal courier was bestowed sparingly. The remaining blazons are twofielded (the upper field occupies one third, and the lower two thirds of the shield) for 14 amīrs; 46 amīrs have a single-field shield or their device stands without a shield. It appears that the most popular emblem by far was the cup or chalice, which occurs on 128 blazons. Two other devices, the *buqja* (89) and the pen box (88) appeared almost as frequently. Trousers or horns of nobility occurred on 43 blazons, all Circassian and then only as an additional device, never on their own.

Mediaeval Arabic literature (mainly Abū'l-Fidā) indicates that certain devices represent court or government appointments. Although they are well known and amply described in the introductory pages of Mayer, I repeat the list here: cup or chalice, *buqja*, pen box, fesse, scimitar, crossbow and arrows, and polo sticks.[6] Heraldic signs which do not point to any specific charge are the lion, eagle, fleur-de-lis, and rosette. Some doubt exists about the crescent, which might be interpreted as a horseshoe, and may signify the office of master of the stables.

The frequency in the blazons of certain signs of office may depend on two circumstances. It is possible that once the new amīr received or selected his blazon, he retained the original device or devices even as he advanced in his career. Retaining the original charges on the shield might have been due to a custom which called for the blazon to remain unchanged during the whole service of the Mamlūk. This, however, does not seem to be the case; it is more likely that the amīr preserved the blazon which he received at his first installation because he was proud

[6] Mayer, pp. 10–18.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of his elevation to the amīrate. There are indications that the heraldic components of the shield could be changed partially or completely when the owner attained a higher post.[7] It also seems that some of the signs of office were not only given to holders of a specific office, but also represented high standing in a general sense.

Mayer noted coins of six Mamlūk sultans with heraldic devices and considered the emblems sultanic blazons. Allan rejects that idea, wondering if they are heraldic devices at all.[8] He argues that if they are blazons they may belong either to the amīr in charge of the mint or to the provincial governor.[9]

Before I reply to Allan's final conclusions, it will be necessary to review the devices which occur in Saracenic heraldry (excluding the tamghas). The discussion below on various devices is based on evidence offered by buildings and objects described in modern works. These devices are usually related to those on coins.

FESSE

Mayer's identification of the fesse reads: "A three-fielded shield without any emblem occurs several times as blazon of the Baḥri Mamlūks... In view of the early date of this blazon it seems obvious that the disk divided into three horizontal bands is in itself the emblem displayed, as it were, on an undivided round shield, and the question to be decided is what object it was meant to represent. Among the insignia of officers of low rank the emblem of the *dispatch rider* (*barīdī*) suggests itself at once, consisting, as it does, of a small plate of copper or silver, *inscribed on one side with the creed formula... and on the other with the name and titles of the sultan*" (italics mine).[10] This three-fielded disc is just what we see on the Mamlūk coins with three horizontally-inscribed or partially-ornamented segments or bands. The three-fielded empty round shield

[7] See the three blazons on Mugbil al-Rūmū's chamfron (Mayer, pp. 167–68, pl. 60). The two lateral blazons contain all the emblems of the central shield, plus an inkstand when he became chief-dawadār.

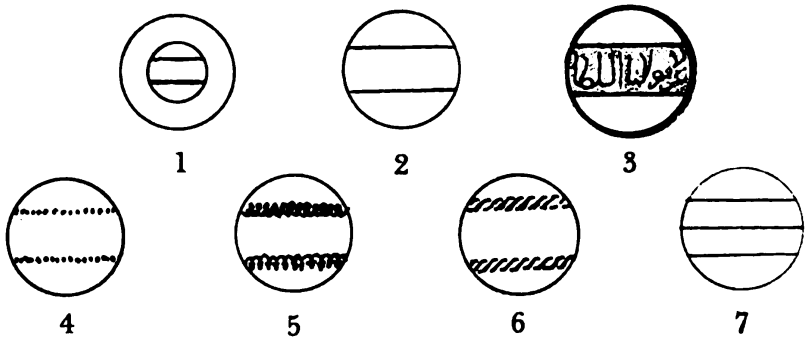
[8] Allan, p. 108.

[9] Allan, p. 102.

[10] Mayer, p. 17.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

is nothing but the simplified version of the originally-inscribed object; when provided with coin legends, it simply signifies the return to its original state. The main component of any Islamic coin is, of course, the legend, which is either peripheral and circular, horizontal, or both. In the case of the fals of Lājīn (*MSES* 166), the inscriptions are peripheral and the round shield of the fesse occupies the center; therefore, the edge of the shield is well within the surface of the flan, within the peripheral legends. On other coins the round three-fielded shield extends over the entire surface of the flan so that the border of the shield coincides with the edge of the coin. Evidently the division of the shield into three horizontal bands, each band with its inscription or ornament, equally occupies the whole flan (see fig. 1 for the first category and fig. 2 for the second). Large numbers of copper coins belong to the second category, as do silver dirhams and gold coins. The latter, however, start only in 810 H. with the second monetary reform of Faraj. It is instructive to compare these coins with the "inscribed shield" of the sultans on many glass mosque lamps (fig. 3). Allan does not seem to have paid sufficient attention to important and easily-perceived details on some Burji gold coins, confusing the straight linear separation lines of the three-fielded shield described above with various ornamental separations (on non-heraldic coins) composed of rows of small pellets, or of tiny fleur-de-lis lines linked together by minute arches, or with the chain separation lines (figs. 4–6).[11] Yet all these ornamental separations are clearly designated in *MSES*. To these non-heraldic separations belong the three plain horizontal lines which separate the four horizontal legends on some coins (*MSES* 741, 745, 750, 793 and 831; fig. 7).



[11] Allan, p. 100.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

A variation of the three-fielded shield is the central segment bendy (figs. 8–9), a characteristic heraldic device which Allan considers an ornament not related to heraldry. Proof that it is a heraldic device is the blazon of the de Pons family with one fesse bendy of three pieces, no. 128 of the armorial roll of the Vicomte L. de Magny's *La Science du Blason* (Paris, 1860), an authoritative work on the European blazon.[12] Allan seems to rely entirely on Mayer in his opinion that the fesse (French *fasce*) is a three-fielded shield without any additional devices. De Magny's armorial roll contains the blazons of five families whose shields display three fesses (nos. 63, 225, 618, 877 and 1272). Six families have two fesses (nos. 137, 317, 323, 453, 1407 and 1471), and there are those who have a fesse charged with three stars (no. 1431); one star (no. 588); a lion (no. 595); two stars and a conch (no. 298); or one conch (no. 375). No. 1245 shows a cabled fesse. These are only samples, the material is extensive. From the variety of devices which are called the fesse in European heraldry, it can be concluded that Mayer did not study the question thoroughly enough and that his definition of the fesse is erroneous.

It may be useful to raise a question here in connection with the fesse: in Mayer's armorial roll of 243 blazons, 154 are three-fielded shields, but only 7 of these are plain, without additional device, and can therefore be called a true fesse according to Mayer's definition, which Allan accepts. Yet the number of barīdī amīrs could not have been this rare, when during the same period the same number of blazons represent 128 cup bearers, 89 masters of the robe, and 88 secretaries. Would it not be possible, if we presume that the blazons were not established for the whole life of the owner but could be modified according to the progress in the amīr's career, that the former amīr barīdī added further emblems to his original blazon whenever he received a higher appointment? If so, the great number of the three-fielded composite shields would be satisfactorily explained.

On metal objects, ornamentation of the background generally denotes that the original field or device was colored; several examples are pre-

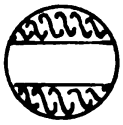
[12] See also J. B. Rietstap, *Armorial Général* (The Hague, 1950) and numerous additions.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

sented in Mayer.[13] Ornamentation of the upper and lower segments on the reverse of *MSES* 250 may have the same meaning, or it could simply be use of empty space (see also figs. 8–10; fig. 11 is a sketch of Aydamur's second shield, *buqja* on ornamented field).


8


9


10


11

There is evidence from non-numismatic material that inscriptions in heraldic devices are perfectly admissible, in spite of Allan's objections.[14] The question will be dealt with more fully in the paragraphs below on the pointed shield and the chalice, and briefly mentioned in the paragraph on the *buqja*. Another peculiarity of the Saracen blazon is that, unlike the European coat of arms, it is never partitioned vertically.

BUQJA (NAPKIN)

Allan contends that the hollow inscribed rhomboid on the coins *MSES* 242–44 (fig. 12) is not a heraldic device, but rather a simple frame. He argues that the mint-date formula which ends inside the rhomboid annuls its value as a blazon.[15] This view can be discarded after examination of two copper coins published in *MSESAdd* (244A and B), struck in Tripoli and very similar to the original issues *MSES* 242-44. They differ from the Cairo and Damascus fulūs of *MSES* in that the entire

[13] ʿAlī b. Shāhīn (Mayer, pl. 56, 4); Khaṭrbak min Aynāl (Mayer, pl. 62, 4); Aḥmad b. Buraq (Mayer, pl. 47, 1).

[14] Inscriptions on the shield are frequent in European heraldry. The blazon of the city and duchy of Rome contained the letters SPQR and a small cross after the "Renovation Senatus" of 1144. The city of Alba had A.L.B.A. Tivoli shows LIBERTAS, NOBILITAS and TIBUR SUPERBUM. Many Italian noble families display letters or mottoes on the shield: the counts of Fagnana, CON LIMPIDEZZA; Arrigoni, AR and others. The Spanish dukes of Infantado have AVE MARIA. The Portuguese dukes of Loulé have four lines on their blazon.

[15] Allan, p. 100.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

mint-date formula is in the marginal legend and the *buqja* in the center is plain but filled in (figs. 13–14). The rhomboid on all three issues, of Cairo, Damascus and Tripoli, whether hollow and inscribed or filled in and plain, is meant to represent the same heraldic device, the *buqja*. In other words, the writing does not change the nature of the emblem, and the problem of other inscribed rhomboids is settled at the same time (fig. 15). With regard to the coin SS.9 (*MSES*, pl. 44, E), Allan would easily have understood my hesitation over the nature of that rhomboid had he examined the illustration on the plate with more attention. The rhomboid here is not isolated from the border of the coin but is connected with it by four straight lines (fig. 16) and constitutes a structure which functions as a separation line for the various parts of the legend.



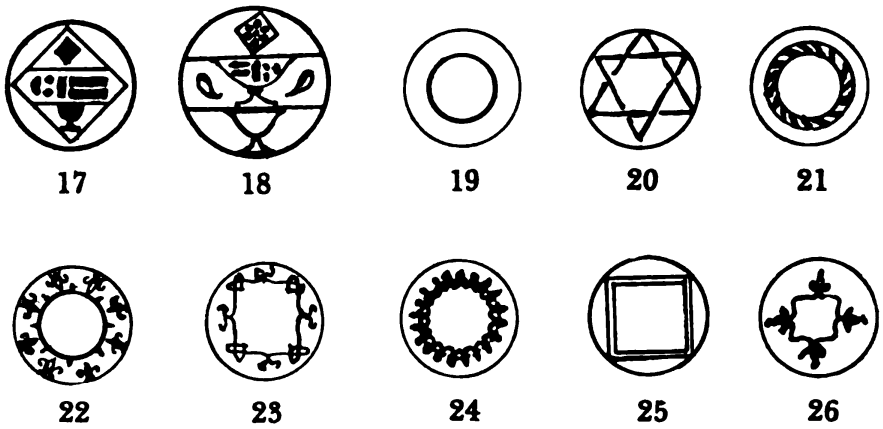
12 13 14 15 16

Allan admits the existence of *buqjas* containing charges and ornaments — there are several examples of them on buildings (fig. 17).[16] However. he objects that the Aleppo fals of Jaqmaq (*MSES* 751) contains a rosette. He could have found a similar *buqja* charged with a rosette on pl. 67, 6 in Mayer as an authentic part of a composite blazon on a copper plate in the collection of the Freiherr Max von Oppenheim Foundation in Berlin (fig. 18).

Figs. 19–26 illustrate some frames which cannot be mistaken for heraldic shields. They are mostly ornamented, but even no. 25 cannot be mistaken for a *buqja*, as it is a double linear square which touches the edge of the coin.

[16] E. Herzfeld, *Matériaux pour un corpus inscriptionum arabicarum*, pt 2: *Syrie du Nord. Inscriptions et monuments d'Alep*, vol. 2 [Planches], Mémoires de l'Institut Français d'Archéologie du Caire, 78 (Cairo, 1954), pl. 165.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



POINTED SHIELD
(also called GOTHIC or NORMAN SHIELD)

According to Allan: "The 'Gothic' shield appears on a copper issue of Sultan Ḥasan dated 762 (no. 373) but there is no reason for thinking it to be any more than a frame like those we have just mentioned. Mayer only mentions it in his book on *Saracenic Heraldry* as a variation shape for a shield; he never interprets it as a blazon in its own right. And again, as with the rhomb, it has an inscription inside it. It can therefore be dismissed as a blazon."[17]

The pointed shield cannot be dismissed so lightly as a blazon. Mayer considered it, with "close diaper pattern" (in reality a criss-cross pattern to indicate on the metal surface that the original shield was colored), to be a blazon, that of Aḥmad b. Buraq, viceroy of al-Malik al-Nāṣir (fig. 27). It is the typical example of a plain pointed shield of a simple color or enamel, with no other emblem on it. Mayer then presents the blazon of Aḥmad al-Mihmandār, commander of the army and leader of the Mecca caravan: "Upper and lower fields white, on a red middle field a white disk *charged with a golden pointed shield*" (italics mine; fig. 28). Further on, he describes the *white pointed shield* as the blazon of Saif al-Dīn Qulunjaq, amīr of a thousand, on a bronze plate from a Paris collection.[18] Finally, a plain pointed shield is among Mayer's simple charges (not as a variation shape for a shield).[19]

[17] Allan, p. 100, para. (d).
[18] Mayer, p. 40 and pl. 42, 1; p. 50 and pl. 41, 3; p. 190.
[19] Mayer, p. 8, no. 34.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Further evidence that these pear-shaped shields without further emblem or charge are an heraldic blazon appears on several glass mosque lamps which bear the names of the Bahri sultans al-Nāṣir Muḥammad and al-Nāṣir Ḥasan. In the catalogue of glass lamps and bottles of the Museum of Islamic Art in Cairo, one mosque lamp of al-Nāṣir Muḥammad described and illustrated shows three plain pointed shields placed at regular intervals on the under side of the bulbous body of the lamp.[20] Six mosque lamps of Sultan al-Nāṣir Ḥasan are also described and illustrated in the same catalogue, each with a certain number of similar pointed shields. The lamps of Sultan Ḥasan carry round, inscribed shields at the same time, illustrating that the conventional blazon and the round, inscribed shield could be used simultaneously.[21] Thus, in the same way that the *buqja* with an inscription in it is a valid heraldic device, the pointed shield with inscribed legends is a true blazon (see *MSES* 373; fig. 29).

As further proof that the pointed shield containing inscriptions was a normal heraldic device, the inscribed, pointed shield of Dawlātbāy, presumably one-time governor of Ghazza, should be mentioned here. However chaotic the political situation may have been at his time, he certainly could not have assumed regal attributes as a functionary of a not very important province of the empire.



27 28 29

CHECKERBOARD

I agree with Allan that this may in some cases be a heraldic sign, but in others only a primitive ornamentation.[22] It seems to be a simple background filler on Qānṣūh al-Ghūri's copper coin (*MSES* 898), while

[20] G. Wiet, *Lampes et bouteilles en verre émaillé* (Cairo, 1929), pl. 6, 313.

[21] Wiet, nos. 285 (pl. 29); 301 (pl. 37); 316 (pl. 42); 319 (pl. 46); 320 (pl. 47); and 330 (pl. 56).

[22] Allan, p. 101.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

on the fals *MSES* 834 it could have a heraldic meaning, though I am not now convinced of the latter possibility. In European heraldry it is a frequently-used device, and is part of the shield (or the entire blazon) of many French families.[23] The checkerboard of 20 white and red squares was Croatia's national coat of arms before that country's annexation by Hungary in A.D. 1091. However, recent study of several sources on Saracen heraldry leads me to doubt whether this emblem was part of Mamlūk heraldic devices at all.

LION

It is difficult to comprehend why Allan separates the lion of Baybars I (fig. 30) and of his son Baraka from the lion of his successors.[24] The repeated mention of the Baybars I blazon by historians and the sculptured lions on several stone monuments, sometimes accompanied by a legend, are proof of the lion's heraldic status which can be adduced from coin evidence as well. The fact that the lion of Baybars is identified by Maqrīzī as his emblem is proof positive; but the fact that similar lions on the coins of other sultans are not noted in the chronicles does not necessarily mean the contrary, particularly when one considers how little importance heraldry was given by mediaeval Arabic authors. In a similar case, no one wrote about the bronze weights of the later Fāṭimid caliphs until my article appeared in 1970, yet they exist.[25] Sultans were not alone in having a lion on their blazon; two amīrs in Mayer's armorial roll also display it on their shields.[26]

The lion on Mamlūk blazons and coins is always depicted as walking, with right or left paw raised and tail swishing across his back. Allan cited the lion on Ṣalāḥ al-Dīn's Mesopotamian issues as a counterargument. What he did not observe is that, on Ṣalāḥ al-Dīn's coins, the lion is presented lying down, in sleeping attitude, surrounded by four stars—the characteristic figure of the *constellation of the lion*—which

[23] See the *armorial général* in L. de Magny, *La Science du Blason* (Paris, 1860).

[24] Allan, pp. 99, 104.

[25] P. Balog, "Islamic Bronze Weights from Egypt," *JESHO*, vol. 13, no. 3 (1970), pp. 233–56.

[26] Aydamus (Mayer, p. 84, pl. 30, 1); Yashbak min Mahdī (Mayer, p. 251–52).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

has nothing in common with the heraldic lion. (For the heraldic lion, see figs. 30–35.) With regard to Allan's remark that there are differences in the attitude of the animal, or that there is a second object (such as the small bush behind the lion in *MSES*, pl. 25, 597b), these are probably present because of the whim of the die engraver. They do not alter the fact that the lion is always a "walking lion."



30 31 32 33 34 35

The question of whether the feline on Baybars's shield is a lion or a panther can be answered. Maqrīzī called it a lion, Max van Berchem thought it a panther because of the word *bars* (panther) in the sultans' names (Barsbāy and Baybars), for this could be *armes parlantes*. However, the feline on Baybars's well-preserved coins shows the characteristic curls of the lion's mane, while the felines on the other sultans' coins have no mane. Saracen heraldry ignores the rampant sitting or facing lion of European blazons. It also ignores that the lion, when its head is facing, is called a leopard by some European heraldists. On many coins of Baybars I the head of the walking lion is in profile (*MSES* 28-38, etc.) while on others (*MSES* 42, 44, 49, 50b, 54), the head is facing (see *MSES*, pls. 2–4).

CUP or CHALICE

One hundred twenty-eight blazons in Mayer's armorial roll include the cup. It occurs in a variety of shapes, either alone as a simple charge or as part of a composite blazon. As a simple blazon, it may be enclosed in a shield, but since the shield is not an essential part of the Saracen blazon, the cup can also stand free in the field. When it stands thus on the coins it is surrounded by legends. On some coins it may also stand in a three-fielded shield (*MSES* 808) similar to any such amīral blazon.

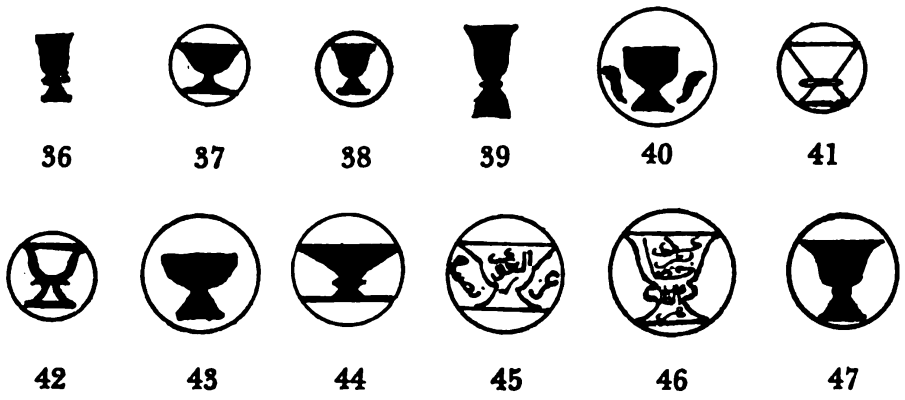
Since the shield is not required by Saracen heraldry, I cannot understand Allan's objection to the cup as an heraldic device on the silver

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

coins *MSES* 721–25 (fig. 36).[27] According to him, "the cup has no shield and is so small and insignificant as to be almost invisible." One wonders what size standards must be applied to qualify a chalice as an heraldic emblem. I have measured the cup on al-Mansūr Muhammad's fals (*MSES* 392; fig. 37) and Jaqmaq's silver coins (*MSES* 746 and *MSES Add* 746 and 746A; fig. 38) and found that the first is three mm high, the second is three and one half mm, and Barsbāy's chalice (*MSES* 721-25) measures four mm. Small or large, it is perfectly visible.

The shape of the cup is almost always indicative of the sovereign who issued the coin. Kitbugha's cup on the fals (fig. 39), which Allan admits is a true blazon, is just as characteristic as those of al-Manṣūr Muḥammad, Barqūq (*MSESAdd* 595B; fig. 40); Jaqmaq (*MSES* 746, 754 and *MSESAdd* 800A; figs. 38, 41–42); al-Ghūri (*MSESAdd* 902A; fig. 43;), and Temirbughā (*MSES* 806; fig. 44).

All the cups on the coins are closely related to the cups in Mayer's armorial roll. That on Barqūq's fals (*MSESAdd* 595B) is flanked by the trousers of nobility and this coin therefore seems to bear a composite blazon (fig. 40). On *MSES* 902, al-Ghūri's name is written across the surface of a cup, and the cup is flanked by *ʿazza-naṣrahu* (fig. 45). Mayer describes the cenotaph of Khudābirdī al-Ẓāhiri, on whose headstone is Khudābirdī's blazon, a cup inscribed with his name in a round shield (fig. 46). At the foot of the tomb is another cup, also in a round shield, but plain (fig. 47).[28] Al-Ghūri's coin and Khudābirdī's cenotaph are proof of the admissibility of inscriptions on Mamlūk blazons.



[27] Allan, pp. 105–6.

[28] Mayer, p. 141, pl. 25, 1–2.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

FLEUR-DE-LIS CHALICE

Allan notes on p. 105: "There is, however, no example of such a chalice on a historical blazon and since, once again, the device has no shield, it seems unlikely that it is any more than a decorative device..." He does not seem to know the glass sherd in the Victoria and Albert Museum on which a plain chalice in the middle field of the blazon is flanked by two fleur-de-lis chalices (fig. 48), even though it is illustrated in Mayer's work. He must also be unaware of the transition figures from the fleur-de-lis to the fleur-de-lis chalice in Mayer (fig. 49)[29] and the coins (*MSESAdd* 845A; fig. 50), which prefigure the contested coins of Barqūq and Faraj (*MSES* 590–91 and 647–49; fig. 51).



48 49 50 51

FLEUR-DE-LIS

This emblem occurs frequently on Mamlūk coins, in unmistakeable heraldic shape, but is poorly represented in Mayer's armorial roll. The blazon in the māristān of Maḥmūd b. Zangi in Damascus is a royal emblem; it cannot, therefore, be considered an amīral shield. Only ten amīrs are known to have had the fleur-de-lis in their blazon. Aḥmad b. Ismāʿīl al-Kujukī, of whose career nothing is recorded, displays a single fleur-de-lis on his round shield. Two others, Ḥaydar b. al-ʿAskarī and Maḥmūd b. Shirwīn, have a two-fielded shield with fleur-de-lis in the lower, larger section. This blazon is identical with the one on the copper coin of al-Ṣāliḥ Ḥājji II (*MSES* 525; fig. 52). The remaining six amīrs show composite blazons in which the fleur-de-lis always occupies the lower segment.[30]

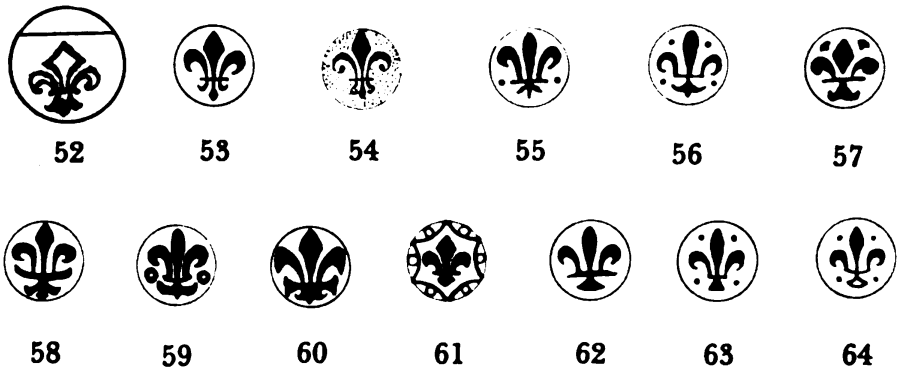
[29] Mayer, pl. 12a, p. 8.

[30] Aynāl al-ʿAlāʾī, later sultan (Mayer, p. 87); Aynāl al-Ḥakīm (Mayer, p. 88); Barsbāy al-Sharafī (Mayer, p. 104); Jānībak (Mayer, p. 130); Shadbak (Mayer, p. 199); Tānibak (Mayer, p. 217); Timirāz al-Shamsī (Mayer, p. 267).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Since the fleur-de-lis is a rare amīral device, it may be a sign of high office. In fact, all the holders occupied commanding posts: the recorded career of Maḥmūd starts with his vizirate in Baghdad. The seven composite shields may signify that the owners started in a low-ranking office, possibly as *barīdī* amīrs (because of the three-fielded shield), then, advancing in successive appointments, added the corresponding insignia to the initial blazon and, upon reaching the height of service, put in the fleur-de-lis. This is only speculation, but is reasonable. As noted earlier, there is nothing to exclude the possibility that the Mamlūk blazon could have been subjected to changes during the amir's advancement.

The fleur-de-lis appears on the fulūs of five Baḥri sultans and of four Circassian sovereigns and in a transitional form between fleur-de-lis and fleur-de-lis chalice on a coin of Qā'itbāy (*MSESAdd* 754C). Its design is always highly stylized and is that of the European and Saracen heraldic lily. However, there are several varieties and the delicate details lend a special personal note. In most cases the sultan can be recognized from the coins. The fleur-de-lis, like the other emblems on the coins, is not some nebulous symbol of royalty, but rather a well-defined personal device (figs. 53–64).



It is surprising that Allan should mention the presence of the fleur-de-lis on the coins of such Crusader princes as Bohemund and Henry of Champagne as if this were an argument against the heraldic nature of the same device on the Mamlūk coins.[31] The fleur-de-lis only indicates

[31] Allan, p. 104.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

where the Mamlūks learned that the blazon of the sovereign has its place on the coinage. The Crusader coins were not the only currency displaying this symbol with which the Syrian Muslims came into contact, for the Sicilian coinage of Charles I of Anjou (1266–85) shows an ample collection of them.

The pellets around the fleur-de-lis of some Crusader coins which Allan observed appear also on three Mamlūk issues. They cannot have any bearing on the heraldic or non-heraldic nature of the Mamlūk coins, especially since some 200 years had passed since the striking of the Crusader issues.

ROSETTE

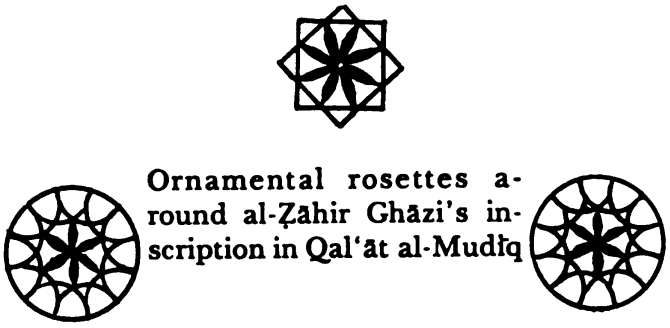
Mayer remarks that one of the oldest devices in Islamic heraldry is the seven-petalled rosette, which was discovered on a capital in the main mosque of Ḥimṣ, adjoining a fleur-de-lis on another face of the same capital. He believes that the capital belonged to the original structure built by Nūr al-Dīn Maḥmūd b. Zangi. However, the capital, which stands upside-down, is not on top of the column to which it belongs but forms its base, and the fleur-de-lis on it is also upside-down. This means that the column with this capital must have been put up during repairs after the mosque was constructed. Judging from the shape of the fleur-de-lis, which is a perfect copy of the device on the blazon of the amīr Aḥmad b. Ismāʿīl al-Kujuki, both emblems on the capital should be attributed to the Circassian Mamlūk period.[32]

In the same paragraph, Mayer considers the rosette as the heraldic emblem of the early Ayyūbids. I have been able to find only one instance of rosettes around an inscription: in the name of an Ayyūbid prince of Aleppo, al-Ẓāhir Ghāzi b. Ṣalāḥ al-Dīn, found on the inner wall of the north tower of the ruined fortress of Qalʿāt al-Mudīq (Fāma, Apamea). The inscription is dated 604 H. and flanked by two six-petalled rosettes (fig. 65); a third, over the inscription, has eight petals. The rosettes are, therefore, not uniform. Furthermore, they are neither free-standing without a shield nor in any kind of shield. Both the flanking rosettes

[32] Mayer, pp. 24, 49 and pl. 19, 3–4.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

are surrounded by an ornamental arabesque frame, whereas the rosette over the inscription is in a different ornamental frame.[33] The diversity of the rosettes and their different ornamental frames indicate that they are simple decorative patterns and not heraldic emblems.



Ornamental rosettes around al-Ẓāhir Ghāzi's inscription in Qal'āt al-Mudīq

65

The rosette is a rarely-used amīral device which occurs on only eight blazons. On two, the six-petalled rosette stands without a shield. On three others it is in a round shield, and on a sixth the round shield contains an eight-petalled rosette.[34] The last two are composite blazons, with two rosettes flanking a cup on one and a yellow vase on another.[35] This vase closely resembles a glass mosque lamp and I suspect Mayer's description may be erroneous. It will be discussed again below.

In view of its scarcity on amīral blazons, the rosette seems to be one of the emblems which denote high standing. Here again, half the owners of the blazon retained their original shield and added the rosette as an afterthought, but the other half abandoned the original blazon and adopted the rosette alone as their new arms. It is interesting to note that one, Maḥmūd al-ʿAinī, who was not a Mamlūk, but the son of a qâdi, had a varied career: chief of police more than once, inspector of pious foundations, qādi, and even chief qādi. Hence the pen box and the vase flanked by two rosettes. The vase may be a mosque lamp and may symbolize the owner's post as inspector of pious foundations.

[33] M. van Berchem and E. Fatio, *Voyage en Syrie*, Mémoires de l'Institut Français d'Archéologie Orientale du Caire, 37 (Cairo, 1913), pp. 189–90, pl. 27, 2.

[34] Mayer, pp. 64, 73, 93, 135, 163, 171.

[35] Mayer, pp. 111, 149–50.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The rosette is a popular, often-used blazon on coins (figs. 66–73). Several five-, six-, and eight-petalled varieties occur on the fulūs of Baḥri and Burji sultans. The *buqja* charged with a rosette is a true composite blazon according to Mayer's concept (*MSES* 751). The presence of the rosette on a mosque lamp is also testimony that the device is a true blazon.



66 67 68 69 70 71 72 73

WHIRLING ROSETTE

Although the whirling rosette (water wheel) is displayed prominently, and inside a circle on some coins, I now have some doubts that it is an heraldic device at all, because it appears on buildings, intricately connected with ornamental patterns, where it could not be considered a blazon.

EAGLE

According to Allan, the eagle on coins is not a blazon but an expression of regal authority in general.[36] As evidence for his argument he recalls the bicephalic eagles on coins of the Zangids and the Artuqids of Ḥiṣn-Kaifā. However, these eagles have nothing to do with the heraldic eagle on Mamlūk blazons or coins, which was borrowed from the European heraldic eagle. The elaborately drawn, much-ornamented eagles on Turkoman coins are evidently decorative figures, originating directly from the Sasanian and post-Sasanian eagles from Persia which occur as repetitive decorations on Samānid, Saljūqid and Byzantine silks.[37] In this regard, it will be sufficient to refer to the plates in a

[36] Allan, p. 105.

[37] *BMCOriental* 3, nos. 346, 351; S. Lane Poole, *Coins of the Urtukī Turkumāns*, Numismata Orientalia (London, 1875), pls. 1 and 5; G. Migeon, *Manuel d'art musulman*, 2nd ed., vol. 2 (Paris, 1927), p. 295.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Wiet publication which show rows of these double-headed eagles.[38] The eagles on Zangid and Artuqid coins are in no way related to the crudely-engraved eagles on the much later Mamlūk coins and on the amīral blazons taken over from the Crusaders. The heraldic eagle of the Palaeologi and that of the Bulgarians was directly transmitted by the Crusaders. The only animals found on Turkoman coins other than the eagle copied from embroidered silks are a lion mounted by a human figure and a fantastic four-footed mythical animal. The Zangid and Artuqid coins are otherwise only epigraphic or display human heads copied from classical coins, or Byzantine scenes or groups of people.

The facing eagle on coins is very similar to those on the blazons of the luxury objects and glass mosque lamps made for the amīrs, except that the coins are engraved with less skill than the objects. The prototype for the eagles on the coins is, without doubt, the gold coinage of the Swabian dynasty in Sicily, whose earliest issues are of Frederick II (1197–1220) during the first period of minting. There seem to be no rigid heraldic rules either for the Sicilian or the Mamlūk die engraver; on both coinages the eagle's head may look right or left, or the eagle may be double-headed. There can be no doubt that the eagle on Mamlūk coins is a true blazon, because Qalāwūn's grandson owned the same blazon as his grandfather.[39] Consequently, the eagle on al-Nāṣir Muḥammad's coins is in a certain sense a family blazon. The eagle on Barqūq's fals (*MSES* 608) is also derived from the Swabian eagle, as is *MSES* 599, in spite of the mint name Ḥamāh across its breast. The question of inscription on the blazon has already been dealt with. Used infrequently, like other emblems which are not signs of office, the eagle appears on the blazon of only six amīrs.[40]

I called the walking eagle a bird in *MSES* but noted several times that it probably is an eagle. Allan may not have observed the details in my description of the fals of al-Ṣāliḥ Ṣāliḥ (*MSES* 338) and misquotes me, positively attributing to me a statement that the small ornament over the back of the walking bird is a small swan. My words are (*MSES*,

[38] G. Wiet, *Soieries persanes*, Mémoires de l'Institut d'Égypte, 52 (Cairo, 1947), pls. 9, 10 and 11.

[39] Mayer, p. 169 and pl. 14.

[40] Mayer, pp. 71–72, 95, 112, 169, 235; pl. 15, pl. 16; the last example is at the Museum of Islamic Art in Cairo.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

p. 190): "bird walking to right, head turned straight back. Above the bird's back, swan-like body, *so far unidentified*" (italics added; fig. 77). I write further, facing the drawing (*MSES*, p. 29): "The bird... walking to right, its head turned back towards a small ornament, either a leaf or a small swan (?)." On pp. 103–4, Allan bases his deductions on a positive identification I never made.

Although Mayer's armorial roll does not contain a walking eagle, the bird does exist in the blazon of an amīr on a wooden beam from a ceiling of a demolished house in Cairo. I have forgotten the amīr's name, not having seen the blazon for more than 20 years, and I do not believe the blazon is published in the catalogues of the Museum of Islamic Art in Cairo, where the beam is kept. The eagle is skillfully painted in its natural colors and stands in profile. Eagle in profile would probably be a more appropriate name than walking eagle.

On *MSES* 395 a small crescent is visible over the back of the eagle, and on *MSES*, pl. 15, 395b we can see Mayer's emblem no. 26. Both coins draw criticism from Allan (p. 103), though the presence of a main device with a second charge is the same idea as a composite shield. The coin *MSESAdd* 595B, on which a large cup is flanked by two primitive trousers of nobility, should also be considered as exhibiting a composite blazon (figs. 40, 78, 79). Qāʿitbāy's coin (*MSES* 845) is further evidence that the small ornament over the back of the eagle in profile is only a decorative element, in this case a small twig with three leaves (fig. 80).



74 75 76 77 78 79 80

SCIMITAR (also BOWS and ARROWS and DAGGER)

One would think that in a society of military caste, arms and armor played a prominent role in heraldry, but among Mayer's 243 amīral blazons, only 15 amīrs display the scimitar, 1 a couple of daggers, 1 a

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

pair of crossbows, and 1 a bow and two arrows.[41] It seems remarkable that only 8 of the 15 amīrs who use the scimitar as a blazon are recorded as having served as *silāhdārs*, although all 15 reached the highest office connected in some way with militay power. This proportion may also indicate that the Mamlūk blazon was not as rigidly unchangeable as one would think. The 7 amīrs who effectively held the office of *silāhdār* in the early stages of their career have a sword in a three-fielded shield. Only one shows two scimitars on a two-fielded shield. Those who are not known to have been *silāhdārs* fall into two groups: 3 amīrs have the scimitar only, which may mean that they dropped their original blazon at the height of their service and adopted the scimitar as a new, representative blazon; the other 4 retained their former composite blazon but added the sword.

It should be noted that no arms ever appear as a blazon on Mamlūk coins. One wonders whether this is not connected with the fact that the sultan Baybars al-Bunduqdārī chose the lion as his blazon and not the crossbow.

PEN BOX

This is the third most popular device on amīral blazons, present on 88, yet there is only a unique copper coin (*MSESAdd* 152B) of the sultan Khalīl b. Qalāwūn which displays it. A better preserved coin, recently published by Ariel Berman (Exhibition of the L. A. Mayer Memorial Institute, Jerusalem) casts some doubt on the attribution to Khalīl. There is no doubt about its heraldic status; it is so plain and ungainly that it could never have been used as an ornament.

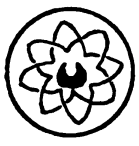
[41] Asanbughā (Mayer, p. 79); Asandamur (Mayer, p. 79); Aslam (Mayer, p. 81); Aynāl al-Yūsufī (Mayer, p. 90); Bahādur al-Badrī (Mayer, p. 94); Jānībak (Mayer, p. 131); Malaktamur (Mayer, p. 152); Manjak al-Yūsufī (Mayer, p. 153); Qānībāy al-Jarkasī (Mayer, pp. 176–77); Qijlīs (Mayer, pp. 189–90); Timur min Maḥmūdshah (Mayer, p. 231); Tughaylamur an-Najmī (Mayer, p. 232); Yalbughā an-Nāsurī (Mayer, p. 248); Yūsuf al-Bajāsī (Mayer, p. 257); Yūsuf az-Zāhirī (Mayer, p. 258). I have since discovered two more amirs with the scimitar at the Museum of Islamic Art in Cairo: Saif al-Dīn Bahādur Manjahī (no. 7229) and Sanqur al-Takrīti (no. 7949).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CRESCENT

The crescent is an emblem rarely used by the amīrs. Mayer suggested that it represented an oriental horseshoe and signified the office of master of the stables because the device was drawn as a smaller circle inside a larger one, the smaller touching the larger at the top.[42] However, the crescent or horseshoe is on the blazon of only two amīrs, although there must always have been a master of the horse. Furthermore, one of the nobles was called ʿAlī b. Hilāl al-Dawla; in his case the blazon would be a crescent as *armes parlantes*. Finally, in de Magny's *Science du Blason*, the Bizet family of Guyenne, listed at no. 1282, has three crescents in their blazon over a Negro's head. The crescents are just like those on the two Mamlūk blazons. In France the oriental closed horseshoe was not known and the objects over the head cannot be anything but crescents. In European heraldry the crescent was widely used; it is visible as *armes parlantes* on the coat of arms of the Spanish counts of Luna.

There is no doubt that the crescent on the coins is a real one, since it is always open at the top (figs. 81–83). It occupies a prominent place in the center of the coin, without a shield, enclosed in a loose decorative frame. It is clearly heraldic, since it has been used as an Islamic ornamental device only in modern times. Only two Baḥri sultans had crescents on their fulūs, and Barqūq and Faraj show a small crescent as part of a curious composite blazon on the reverse of their coins (*MSES* 598, 659). It is probably the same reverse reused by Faraj. I cannot explain this unusual grouping; some of the amīral blazons pose equally puzzling devices.



81



82



83



84

[42] Mayer, p. 25.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

UNUSUAL AND UNCONVENTIONAL EMBLEMS

Not only conventional and well-known devices are employed on amīral blazons. Caution should therefore be used before condemnation of a peculiar emblem. One of these is an object which Mayer called a vase on a composite blazon on the wooden ceiling of the madrasa of Maḥmūd al-ʿAinī.[43] Closer inspection reveals the device is more likely the drawing of a glass mosque lamp than a flower vase. It is round-bellied, with a large and wide funnel-shaped neck and an inverted funnel-shaped foot or rim. No suspension loops are painted around the convex body of the object but it would have more justification on the blazon of an inspector of pious foundations (Maḥmūd al-ʿAinī's appointment) than a simple flower vase. If the object on Maḥmūd's blazon really is a mosque lamp, then the heraldic status of the mosque lamp on the coins of al-Nāṣir Ḥasan (*MSESAdd* 374A) and al-Ghūri (*MSES* 898, 899, 901) could also be justified.

Another surprising but undoubtedly authentic heraldic device is seen in the mausoleum of Baybars Jāliq in Jerusalem, flanking the inscription on the wall that commemorates his name. Mayer described it (p. 110) as a "fleur-de-lis with eleven leaves, instead of three." The illustration shows clearly that it is a stylized palmetto or date-palm with 12 (not 11) ribbed, arched leaves and a central bud standing up.[44] Instead of having roots, the palm is emerging from the treble stem of the conventional fleur-de-lis bound together by a transverse ribbon (fig. 84). It is evident that this lower end of the device induced Mayer to make his mistake. If such a palmetto were on a coin, one could understand a critical eye's rejecting it as a blazon.

[43] Mayer, p. 150 and pl. 61, 3.

[44] M. van Berchem, *Matériaux pour un corpus inscriptionum arabicarum*, pl. 2: *Syrie du Sud.* vol. 1 *Jerusalem "Ville,"* Mémoires de l'Institut Français d'Archéologie Orientale du Caire, 45 (Cairo, 1922), pp. 223–24 (no. 72); vol. 3, pts. 1–2 (Cairo, 1920), pl. 55.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CEREMONIAL SADDLE

A drawing of the only amīral blazon with this device is presented (fig. 85) to assert that it is a legitimate blazon of ʿAlī b. Baktamur.[45] It is so rare a device that its use as a decorative example by the die engraver is difficult to imagine. I mention it because Allan noted on p. 105 the inclusion of coins with a horseman in *MSES* but there are no Mamlūk coins with a horseman. He is, however, correct in pointing out that the lion with rising sun on *MSES* 392 is a decorative device borrowed from dirhams of the Rūm Saljūqids.



85



86



87

MULTIPLE BLAZONS FOR SOME AMIRS

In most cases the amīrs have only one heraldic shield. It does happen, though seldom, that an amīr owns more than one shield, and with different blazons. Thus Aydamur, viceroy of Syria, shows one round shield with *buqja* at the beginning of the inscription in his name on a copper basin, and a second shield with walking lion at the end of the inscription (fig. 86).[46] The upside-down capital in the Ḥimṣ main mosque shows a rosette and a fleur-de-lis on two adjoining faces; both emblems belong to the same owner.[47] Muqbil al-Rūmī also has two different blazons on the chamfron of his horse's armor; the two lateral shields hold

[45] Migeon, fig. 292.
[46] Mayer, p. 84 and pl. 30, 1.
[47] Mayer, pl. 19, 3.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the signs of his offices as *khāṣṣaqi* and *rā's nawbat al-jamdāriya* (two cups and a *buqja*); the central shield contains the same insignia, with a pen box added, a new blazon when he became second *dawadār* and later grand *dawadār*.[48] Yashbak min Mahdī, vizīr, amīr *silāh* and regent, had one conventional blazon and a second with lion.[49] Over the doorway of a modern building near the mausoleum of the amīr Qaymarī, at Ṣālihiya in Damascus, there is an ancient lintel with three adjoining but separate round shields which evidently belonged to one and the same person. The central shield has a fleur-de-lis and the two flanking shields each carry a lion facing the center (fig. 87).[50]

There exists an example on a glass mosque lamp showing that the sultan al-Nāṣir Muḥammad had at least two heraldic emblems simultaneously: a six-petalled rosette on one, and a plain-pointed shield (at the same time as the usual "inscribed round shield"), on another.[51] Al-Nāṣir Ḥasan shows the plain-pointed shield simultaneously with the "inscribed shield" on several of his mosque lamps.[52]

I have come to the conclusion that the rigid principles of European heraldry cannot be applied to Saracen heraldic concepts. The main idea is identical: the blazon serves to identify the nobleman and denote his amīral status. However, whereas the Europeans had title and blazon bestowed with the principle of heredity, and the European blazon could not be changed except by grant of the sovereign, it is probable that the Saracen amīr chose his own emblems from early times. It was formerly believed that the blazon of the amīr (and probably that of the reigning prince) was hereditary. I must now conclude that the son probably not so much inherited as took voluntarily his father's or ancestor's emblem because of the prestige of his forebear. All those cases where there is continuity of the blazon concern princely families. I have yet to find an amīral blazon which passed from father to son; it is true that the armorial roll contains too few known men.

[48] Mayer, p. 168 and pl. 60.

[49] Mayer, p. 251.

[50] Mayer, pl. 5, 2.

[51] Wiet, *Lampes*, pl. 12, 4070; pl. 6, 313.

[52] See note 19 and Wiet, *Lampes*, 4259 (the last either al-Naṣir Muḥammad or al-Nāṣir Ḥasan).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

SIGNS OF OFFICE

Although certain signs of office doubtless represent the appointments which they symbolize, some, like the scimitar, also have a general value indicating high rank. The specific value of the symbols of office cannot always be absolute, as there were, especially at later times, more amīrs than emblems. Therefore, in order to create an individual blazon the devices had to be combined and often multiplied on the shield. Then there are heraldic signs which are not related to any specific appointment (lion, eagle, fleur-de-lis, rosette, crescent) which are probably status symbols.

SULTANIC BLAZON

Allan is convinced that the devices on the coins, except the lion of Baybars, the cup of Kitbughā and the fesse of Lājīn, are neither heraldic emblems of the sultan nor heraldic emblems at all, but rather ornamental figures derived from heraldic elements (p. 102). He points out a well-known feature, the inscribed shield, which he says replaced the blazon for the sultans, excluding it completely. It is true that the inscribed round three-fielded shield bearing the sultan's name and accompanied by a short panegyric protocol on one, two, or all three segments of the shield became the standard manifestation of the sovereign on public buildings and on such objects as mosque lamps, pen boxes, and plates. The inscribed shield changed from a personal heraldic badge to a sign of authority and only the sultan's name indicated the change of sovereign. However, it seems to me that even this stereotyped inscribed shield developed from the fesse, the popular and widely-used three-fielded shield.

The inscribed shield was used on the coinage from al-Nāṣir Muḥammad's reign onward, simultaneously with the various personal, traditional, heraldic devices. This same coexistence is observed on various objects. The presence of the pointed shield and the six petalled rosette

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

on al-Nāṣir Muḥammad's mosque lamps has been mentioned.[53] The pointed shield on similar lamps of al-Nāṣir Ḥasan was also described (p. 193 above). The caliph-sultan al-Musta'īn Billāh put a pointed inscribed shield on the wall of the main mosque in Gaza; this emblem is very similar to the pointed inscribed shield on the fulūs of al-Nāṣir Ḥasan. A pointed inscribed shield used by a Mamlūk nobleman, Dawlātbāy, according to van Berchem a governor of Gaza, further confirms the relationship between the sultanic inscribed shield and the amīral blazon.[54]

I wish to add one more proof that the oridinary Mamlūk blazon was not necessarily abandoned once an amīr became sultan. The copper platter (no. 3169) in the Museum of Islamic Art in Cairo, engraved with the sultanic protocol *al-Malik al-Ashraf Qānṣuh al-Ghūri* and the designation *bi-rasm al-maraqkhāna*, shows the collective blazon of the Circassian Mamlūks on its face, seven times repeated. There can be no doubt about the person of the sovereign, nor that the plate was part of the royal dinnerware.

Allan admits that the lion of Baybars, the cup of Kitbughā and the fesse of Lājīn are true blazons on the coins; at the same time he states that the identical devices on the coins of all the other sultans are either the badges of the local governor, or of the amīr who was in temporary charge of the mint (or somebody else?), but not of the sultan. However, he does not present proof for this revolution which should have taken place in the principles of Islamic minting at the time of Qalāwūn or his immediate successors. Such a novelty would have uprooted the rules dominating the coinage of any Islamic country, an idea so unlikely that it does not merit discussion.

There may be another reason for the seemingly inconsistent use of various emblems at the same time on the coins. The rules of Saracen heraldry and the outlook on blazons, indeed the very concept of the nature of nobility in Islamic society in Syria and Egypt, are very different from those in Europe. They are important in a general sense, but not rigid in detail. It is probable that a descendant freely chose a famous ancestor's badge because of its prestige, rather than for its

[53] Wiet, *Lampes*, pl. 12, 4070.
[54] Mayer, p. 39.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

hereditary connections. It would seem that the badges could be changed during the active life of the owner. In the case of a sultan, there is, of course, no further advancement; but only limited importance was given to the blazon and consequently the die engraver had more liberty. Yet the devices on the coins are so characteristic that one can recognize the sultan from most coin blazons without having read his name. However loose the regulation of Mamlūk heraldry, the devices on the coins must be considered the personal badges of the sovereign. I cannot find a single point in Allan's argument with documented proof to show that the devices on the coins are not heraldic devices and that they belong to anyone except the sultan.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

THE COINAGE OF NŪR-ĀWARD, ATABEG OF LUR BUZURG, 751-57 H./A.D. 1350-56

(PLATES 24–25)

STEPHEN ALBUM

Early in 1974 the American Numismatic Society acquired a group of 12 coins, thanks to the kindness of M. T. Abgarians of Tehran. Included in this group, which seems to derive from a single hoard, are 7 specimens of a hitherto unrecorded anonymous type, ascribable to Nūr-Āward, one of the atabegs of Lur Buzurg.[1] In addition, the group contained 4 specimens of the usual anonymous type of Shaykh Ḥasan Buzurg Jalāyir (736–57 H. / 1335–56 A.D.), struck at mints in Lur Buzurg, also under the authority of Nūr-Āward. To this group, I have appended an additional 22 specimens, from various collections, public and private, in an attempt to survey the unusual coinage of Nūr-Āward.[2]

[1] There is some question about the proper form of the atabeg's name, which occurs in the sources both as Nūr-Āward (see Muʿīn al-Dīn Yazdī, *Mawahib-i Ilāhī*, British Library ms. Or. Add. 7632, f. 158a; M. Kutubī, *Tārikh-i Āl-i Muẓaffar*, ed. ʿAbd al-Ḥusayn Nawāʿi [Tehran, 1335/1956], p. 50), and as Nawr al-Ward ("rosebud"). The latter form was adopted both by the later chroniclers and by the secondary authorities (see Muʿīn al-Dīn Naṭanzi, *Muntakhab al-Tawārikh-i Muʿīnī*, ed. J. Aubin [Tehran, 1336/1957]).

Not only do we lack contemporary coins or inscriptions bearing the name, but we cannot isolate one or the other form as demonstrably earlier. Nawr al-Ward appears as early as 867 (Brit. Lib. ms. Or. Add. 1566) and Nur-Award in a ms. described by Rieu as of the 9th/15th century (Mu'in al-Din Yazdi, Brit. Lib. ms. Or. Add. 7632). I have no reason to suspect that Brit. Lib. ms. Or. Add., 7632 would have incorporated a change in the name; the fact that the form Nūr-Āward is preserved in the earlier manuscripts lends support to that being the correct form.

[2] I wish to thank Henri Arroyo of Toulon, France, for having sent photos and descriptions of specimens in his collection, and N. M. Lowick of the British Museum, C. M. Webdale of Bedford, England, and Michael Bates, of the American Numismatic Society, for having placed coins at my disposal for study.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The province of Lur Buzurg (Greater Luristān) occupied a stretch of territory roughly coincident with the region presently occupied by the Bakhtiyārī tribe, south of the modern province of Luristān in Iran (mediaeval Lur Kūchik [Lesser Luristān]).[3] The chief town of the region was Aydhaj, the modern Īzeh, also known as Māl-Amīr ("the amīr's city"). Except for a few coins of the Buwayhid period (fourth century H. / tenth century A.D.) and a solitary Seljuq specimen,[4] the entire activity of the mint fell within the fourteenth and early fifteenth centuries.

Although the atabegate of Lur Buzurg was established nearly a century before the Mongol conquest of Iran, it was not until the reign of the Īlkhānid Ghāzān Maḥmūd (694–703/1295–1304) that coinage first appeared in the province.[5] The earliest example bears the mint name Lur Buzurg and is dated 700 H.; thereafter, intermittent issues appear over the next 40 years, all in the name of an Īlkhānid ruler, the last a

[3] For general information on Lur Buzurg and Lur Kūchik, see the articles by V. Minorsky in *Encyclopedia of Islam*, s.v. "Lur Buzurg," "Lur Kūchik," and "Luristān."

[4] In order to simplify the references to coins in the subsequent notes, the following abbreviations have been used to indicate the collections consulted:

BMC = British Museum, published examples (S. Lane-Poole, *Catalogue of Oriental Coins in the British Museum*, 10 vols [London 1875–90], vols. 3, 6, 10).
BM = British Museum, unpublished examples.
BN = Bibliothèque Nationale, Paris.
SA = author's collection
HA = collection of Henri Arroyo, Toulon, France.
ASH = Ashmolean Museum, Oxford.
YKB = Yapı ve Kredi Bankası, Istanbul.
IB = Iran Bastan Museum, Tehran.
ANS = American Numismatic Society, New York.
IA = Istanbul Arkeoloji Müzesi, Istanbul.
LI = collection of Lutz Ilisch, Billerback, Germany.

For Buwayhid specimens, see E. K. M. von Zambaur, *Die Münzprägungen des Islams* (Wiesbaden, 1968), p. 60; the Seljuq specimen was mentioned briefly in M. B. al-Ḥusaynī, "Dirāsa Tuhlīliyya li'l-ʿAnāsir al-Zakhrafiyya ʿalā al-Nuqūd al-Saljūqiyya," *Sumer*, 25 (1969), p. 21. There is also a Seljuq dinar reported from Lūrdijān, dated 496 (*BMC* vol. 3, no. 67).

[5] There exists no adequate study of the history of the atabegs. The account in *EI* by Minorsky is too sketchy. A better, but poorly documented account, is furnished by Ḥ. Sotudeh, *Tārikh-i Āl-i Muẓaffar*, 2 vols. (Tehran, 1346–47/1967–68). The chapter on Lur Buzurg falls in vol. 2, pp. 132–46.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

rather crudely-manufactured issue in the name of Muḥammad, dated 738.[6] All of these "Īlkhānid" issues bear the mint name in the form Lur Buzurg. There follows a long hiatus in the extant series, which resumes only in 751 with an anonymous coinage closely resembling contemporary issues of Shaykh Abū Isḥāq Īnjū in Fārs and ʿIrāq ʿAjam (no. 13). These coins, struck from 751 until 754, bear not only the provincial form of the mint name, Lur Buzurg, but have on the obverse *Aydhaj*, which was then, as now, the chief city of Lur Buzurg. They may be considered a transitional series, bridging the earlier coins, with mint name Lur Buzurg, and the later emissions, with mint name Aydhaj alone. This is the first type attributable to Nūr-Āward, and is found in several subvarieties (nos. 1–7).

The next issue, the second of Nūr-Āward, coincides with the regular series of silver dinars struck by Shaykh Ḥasan Buzurg at Baghdād and other cities in ʿIrāq ʿArab and Khūzistān between 755 and 757. It is the first type to bear the mint name of Aydhaj alone,[7] and dated specimens of it are exclusively of the year 756. This series sees the inception of minting at other towns within the formal jurisdiction of the atabeg, a factor that would explain the replacement of the provincial name, Lur Buzurg, by that of its chief city. Kūhgīlūya and Bāzuft are the only ancillary mints so far known for this series.

The year 757 witnessed a remarkable new anonymous coinage in Lur Buzurg which, as we shall demonstrate, is also an issue of Nūr-Āward (his third type, nos. 5–11, 21–28). In addition to Aydhaj and Kūhgī-

[6] The known early coins of Lur Buzurg mint are as follows: Ghāzān Maḥmūd, 700 (IA); Ūljāytū, 714 (SA); Abū Saʿīd, 729 (BN, YKB); Abū Saʿīd, Khānī, 33 (= 734/35 H.) (*BMC* vol. 10, no. 238d, and in virtually all other collections); Muḥammad (Īlkhānid), 738 (IB).

Lane-Poole (*BMC* vol. 10, no. 238d) misread the mint as Arsābend, an error perpetuated by Zambaur (p. 43) who also misread some specimens as Arzband/Arzand (p. 42).

[7] M. A. Seifeddini, *Monety Ilkhanov XIV veka* (Baku, 1968), p. 145, where a coin of Aydhaj dated 717 is cited. Despite his usually reliable mint readings, I am skeptical of the reading of this mint as Aydhaj, particularly in light of the 714 and 729 coins of Lur Buzurg mint noted above. Moreover, as my arguments will show, the name of the province, Lur Buzurg, was used consistently until the 750s. The appearance of the city name Aydhaj on the coins as early as 717 would be quite anomalous.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

lūya, four additional mints are recorded for this type, Bāzuft, Gandumān, Lūrdijān, and Rāmuz, which together comprise the full complement of mints in Lur Buzurg which operated at any time during the fourteenth century. This ephemeral issue was the last type of Nūr-Āward.

Before outlining the subsequent history of the mints of Lur Buzurg, let us first note the forms and locations of those mints. Bāzuft was the summer capital of the atabeg,[8] perhaps located at the place shown on modern maps as Qalʿa Bāzuft. Kūghīlūya was, and still is, the name of a sprawling district whose chief city is Bihbihān. The town of Bihbihān is first mentioned by Kutubī in connection with the Muẓaffarid intervention in Lur Buzurg in 757/1356, and was the site of Mubāriz al-Dīn's decisive defeat of Kayūmarth b. Takla.[9] The mint of Kūhgīlūya, occasionally written in its Arabicized version, Kūhjīlūya, was probably located at Bihbihān.[10] Lūrdijān, according to Yāqūt, was a city in the district of Ahwāz, on the border of Fārs, and was reckoned by Ḥamd Allāh Mustawfī as part of Lur Buzurg.[11] Gandumān is a town and

[8] Yāqūt b. ʿAbdallāh al-Ḥamawī, *Kitāb Muʿjam al-Buldān*, 1 (1866; reprint ed. Tehran, 1965), p. 467.

[9] Kutubī, p. 51. Zambaur, p. 215 lists this mint in the form Kūh-L. . ., apparently based on a worn or partially struck specimen.

[10] The recent study of Kūhgīlūya by H. Gaube (*Die Südpersische Provinz Arrağan/Kūh-Gīlūyeh von der arabische Eroberung bis zur Safawidenzeit*, Österreichische Akademie der Wissenschaften, Philosophische-historische Klasse, Denkschriften 107 [Vienna, 1973]) fails to note the coinage at that mint during the late fourteenth century. Gaube, citing Zambaur, mentions some late thirteenth-century coins and one early fourteenth-century coin (dated 729) supposedly of Arrajān, but all of these are most probably misreadings or barbarously rendered mint names, particularly the coins from the Johnston sale (660, 687 H.; p. 76). The 729 coin is undoubtedly a misreading of Erzincan (Arzinjān), perhaps from one of the contemporary imitations so abundant in fourteenth-century Anatolia. Thus the basis for Gaube's assumption of an attempted Īlkhānid restoration of Arrajān as chef-lieu of Kūhgīlūya must be rejected as erroneous. A safer guess for the site of Kūhgīlūya's capital would be Bihbihān, especially if indeed the destruction of the Thakān Bridge necessitated the more southerly route, as suggested by Gaube (p. 76), the one used in 795/1393 by Tīmūr en route to Shīrāz and described by the latter's historian, ʿAlī Yazdī (cited by Gaube, p. 134).

[11] Ḥamdallāh Mustawfī Qazwīnī, *Nuzhat al-Qulūb*, trans. G. Le Strange, *E.J.W. Gibb Memorial Series*, vol. 23, pt. 2 (London, 1918), pp. 58, 74; Yāqūt, vol. 4, p. 369; G. Le Strange, *Lands of the Eastern Caliphate* (London, 1966), p. 246.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

district in the present *shahristān* of Shahr-e Kord, today reckoned as part of the province (*ostān*) of Iṣfahān; Ḥāfiẓ-i Abrū assigned it to Luristān without designating which of the two Luristāns was intended.[12] Finally, Rāmiz or Rāmuz was the popular form of Rāmhurmuz at the time, according to Ḥamd Allāh Mustawfī; Rāmhurmuz remains a large town in Khūzistān province.[13]

With the deposal of Nūr-Āward in Ṣafar 757 / February 1356, Lur Buzurg came under the suzerainty of the Muẓaffarids. Beginning in that or the following year, a nearly continuous series of coins, all of Muẓaffarid types, survives from Aydhaj and the other Lur Buzurg mints (with the exception of Lūrdijān, not known for issues after 762). The series extends to the end of the Muẓaffarid dynasty in 795, and continues into the first subsequent Tīmūrid emission, datable to 795–96. After Tīmūr's monetary reform of 796/1393–94, all six mints cease regular production; only a single tanka of Tīmūr, struck at Aydhaj, and a tanka of Shāh Rukh, struck at Kūhgīlūya, are known.[14]

In general, the Muẓaffarid issues from mints in Lur Buzurg share the same weight standard with the other Muẓaffarid mints, but employ distinctive types, often quite different. It was this phenomenon that led me to associate the other five mints with Aydhaj prior to the dis-

[12] Ḥāfiz-i Abrū (Shihāb al-Dīn ʿAbdallāh b. Luṭfullāh al-Khwāfī), *Dhayl-i Jāmiʿ al-Tawārikh*, ed. K. Bayānī, 2nd ed. (Tehran, 1350/1971), p. 264. See also the *Farhang-i Jughrāfiyāʿī-yi Iran*, vol. 10, pp. 170-71. The town is located 18 km southwest of Burūjen, and is noted for its cold winter and *sardsīr* climate. It is also mentioned by Rashīd al-Dīn Ṭabīb in *Mukātabāt*, ed. K. B. Moḥammad Shafiʿ (Lahore, 1947).

[13] Hamdallāh Mustawfī Qazwīnī, p. 109. A form approximating Rāmūz can still be heard as a popular contraction of the more cumbersome Rāmhurmuz, especially by bus conductors shouting their destination in quest of additional passengers.

[14] The information in this paragraph derives largely from unpublished specimens in various collections. On the nature of Muẓaffarid numismatics, J. M. Smith has shown the existence of a sequence of reduced weight standards under the later Īlkhānids, beginning with the coinage reform of Ghāzān Maḥmūd *ca.* 696/1297, "The Silver Currency of Mongol Iran," *JESHO* 12 (1969), pp. 16–41; the metrological data presented by Seifeddini demonstrates the persistence of this phenomenon after the death of Abū Saʿīd, under the shadow Īlkhānids supported by the Chūpānids until 758/1357. See also S. Album, "Notes on a Hoard of Silver Coins from the Time of Iskandar Qarā-Qoyūnlū," *NC*, 7th ser., vol. 16 (1976), p. 115, n. 9.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

covery of the third type of Nūr-Āward, which conclusively demonstrates the validity of that association. Thus, Shāh Shujā''s extensive coinage of 762–64, on a standard of 12 and 24 *qīrāṭs*, is uniform at all mints outside Lur Buzurg; the atabeg's mints share the usual obverse, but have a distinctive reverse, on which the mint name, and often the date as well, is repeated. The type is represented at Aydhaj, Bāzuft, Lūrdijān, and Rāmiz.[15] Similarly, the 16-*qīrāṭ* issue of 768–70 has a characteristic type at Aydhaj, Bāzuft, Gandumān, and Rāmiz.[16] However, the Lur Buzurg mints follow Shāh Shujā''s usual types on the 14-*qīrāṭ* coins of 775–77 and subsequent issues of that ruler.[17] Under Tīmūr, a distinctive type used by all four mints reappears, both in the Suyūrghatmish issues of 789–90, and in the Maḥmūd series of 795–96.[18]

A peculiar feature of these mints is that, occasionally, two are inscribed on a single coin, one on the obverse, the other on the reverse; all known examples are on coins in the name of Shāh Shujā'. Two of the three known examples combine cities that were respective summer and winter headquarters of tribal elements, such as the combinations of Bāzuft and Aydhaj, and of Lūrdijān and Rāmiz. The third juxtaposes the two summer headquarters of Gandumān and Bāzuft. All of these coins remain unpublished.[19]

Of the mints of Lur Buzurg, Aydhaj appears to have been by far the most prolific, and is represented in nearly every series struck between 755/1354–55 and 796/1393–94, while the other mints are more sporadically noted among extant specimens. However, the rather random distribution of dates of the latter mints suggests that all of them did indeed participate in all issues (except perhaps Lūrdijān, as noted above), but produced smaller quantities than at Aydhaj. Such a situa-

[15] For the type, see *BMC* vol. 10, no. 673m and 673n (24 and 12 *qīrāṭs*, respectively, the two denominations of this issue and standard). For the Luristānī issues: Aydhaj, *BMC* vol. 6, no. 671; vol. 10, no. 671a; vol. 6, no. 674; vol. 10, no. 674f; vol. 6, no. 675 (and many others in most collections); Bāzuft, *BMC* vol. 10, no. 671f (and others); Lūrdijān, *BMC* vol. 10, no. 673k; Rāmiz, *BMC* vol. 10, no. 671k and ANS unpublished.

[16] Aydhaj, HA, BN, IB, all unpublished; Bāzuft, *BMC* vol. 10, no. 683e, IA; Gandumān, BM; Rāmiz, HA (2 specimens), LI.

[17] See Aydhaj, 775: HA (3 specimens), SA.

[18] These coins, largely in SA, will be discussed in detail in my doctoral dissertation.

[19] In IB, SA, HA, respectively.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

tion is evinced by the proportional representation of the mints among the 15 known Type Three Nūr-Āward coins: 7 are from Aydhaj, and 8 from all the other mints together.

We must now turn to an historical discussion of the three types of Nūr-Āward's coinage, in order to understand the nature of each issue and to unravel the historical significance of the types. Considerable effort will be devoted to proving that the third type is indeed an issue of Nūr-Āward, rather than of his successor, Pashang. The background of this issue will become apparent in a discussion of the details of contemporary chronology and events in the neighboring kingdoms, and by comparison of the coinage with those of the atabeg's neighbors. It must be emphasized that our knowledge of Īnjūyid, Jalāyrid, and Muẓaffarid coinage of the 750s is still quite fragmentary, but further discoveries should serve to corroborate conclusions reached here.

The resumption of Lur Buzurg's coinage in 751/1350–51, after a hiatus of more than a decade, appears to coincide more than fortuitously with the accession of Nūr-Āward (b. Sulaymānshāh) in that year.[20] Naṭanzī asserts that upon his accession Nūr-Āward devoted his life to wordly pleasures, squandering the copious treasury inherited from his predecessors, to the extent that his lavishness attracted the envy of Shaykh Abū Isḥāq Īnjū.[21] It is thus entirely plausible to assume that the resumption of coinage reflected the new atabeg's desire to spend the accumulated wealth of his kingdom, and formed the cash basis of that extravagance.

The first type of his coinage, struck from 751 until 754, resembles an issue of Shaykh Abū Isḥāq, with obverse enclosed within a pentafoil

[20] The date 751 is tentative, and is based on the composite of two textual accounts: Amīr Sharaf Khān Bidlīsī, *Sharafnāma*, ed. M. ʿAbbāsī (Tehran, 1964), p. 55; Naṭanzī, p. 44.

[21] Naṭanzī, p. 49; this passage is also confused, and combines the two reigns of Nūr-Āward and Pashang into a single episode. However, the mention of Shaykh Abū Isḥāq, who was deposed at about the same time as Nūr-Āward, implies that the account concerns Nūr-Āward at least as far as the word *michārbid* in line 12 of the Tehran edition (p. 49). The next sentence plainly refers to Pashang, for Nūr-Āward certainly did not reign for 39 years!

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

and reverse in an identical *miḥrāb*-like ornamental border.[22] Moreover, the two series agree in weight standard (18 *qīrāṭs* = ca. 3.26 g).[23] However, their inscriptions are remarkably different, for the atabeg refused to place Abū Isḥāq's name and titles on the coins, issuing the type anonymously, replacing the ruler's name with the phrase, "struck at Aydhaj;" the provincial name, Lur Buzurg, is inscribed on the reverse. Because of the unusual device of combining the type of Abū Isḥāq with anonymous legends, the classification of this issue is ambiguous. I am inclined to consider it a quasi-autonomous issue of the atabeg, intended to proclaim his own sovereignty, but at the same time, to acknowledge, to a limited extent, the suzerainty of Abū Isḥāq. We are not informed whether this acknowledgement was volunteered by Nūr Āward, or whether it had been forced upon him by Abū Isḥāq. However, the former seems more plausible in light of contemporary conditions, for not only do we know of previous friendly contact between Afrāsiyāb, Nūr-Āward's predecessor, and Masʿūdshāh Īnjū, a brother and predecessor of Abū Isḥāq,[24] as well as a later friendship between Nūr-Āward and Abū Isḥāq, but we have evidence that Nūr-Āward was on hostile terms with his immediate neighbor to the west, Shaykh Ḥasan Buzurg Jalāyir.[25] Thus this coinage may reflect Nūr-Āward's desire to assert his own independence, while still endeavoring to maintain

[22] Iṣfahān, 752, in BM. This is the earliest type on which Shaykh Abū Isḥāq Īnjū styles himself "Al-Sulṭān al-Aʿẓam," having previously contented himself with the simple epithet "Al-Mutawakkil ʿalā Allāh," "he who puts his trust in God."

[23] This standard of Abū Isḥāq, of which dated specimens range from 751 to 755, is one of the most poorly kept, and reveals a disconcertingly large proportion of both light and heavy specimens. However, the Aydhaj/Lur Buzurg coins fall into the same range of weights as do the proper coins of Abū Isḥāq, and thus agree in standard, as well as in the poor maintenance of that standard. It is the fact that they agree which is significant to our argument.

[24] Naṭanzī, p. 49; when the Īnjūyids were temporarily driven out of Shīzāz in 741/1340–41 by the Chūpānid Pīr Ḥusayn, Masʿūd Shāh, Abū Isḥāq's elder brother, took refuge with Afrāsiyāb for two years (Zarkūb-i Shīrāzī, *Shīrāz Nāma*, ed. Ismāʿīl W. Jawādī, [Tehran, 1350/1971], pp. 84–85).

[25] Ibn Baṭṭūṭa mentions that upon his arrival in Baghdād in 748/1347, its ruler, Shaykh Ḥasan Buzurg, was away fighting Afrāsiyāb, "chief of the Lūr lands" (Muḥammad b. ʿAbdallāh, known as Ibn Battūṭa, *Travels*, 2, trans. H. A. R. Gibb, Hakluyt Society, Works, 2nd ser., vol. 117 [Cambridge, 1962], p. 175).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

cordial relations with Abū Isḥāq, upon whose assistance and indebtedness he might later be compelled to rely.[26]

In Shawwāl 754 / November 1353, Shāh Shujāʿ, acting on behalf of his father, Mubāriz al-Dīn Muḥammad, succeeded in conquering Shīrāz from Abū Isḥāq and forcing the latter to transfer his center of operations to Iṣfahān, where for three years he continued to resist the repeated sieges and offensives launched by Mubāriz al-Dīn, until he was executed in 757/1356. It was probably at this time (754) that Nūr-Āward formally withdrew from Īnjūyid suzerainty, for the lamentable state of Abū Isḥāq after his ouster from Shīrāz eliminated any conceivable advantages which might have accrued to the atabeg from further recognition, and at least nominally threw in his lot with Shaykh Ḥasan, to the extent of recognizing the Jalāyrid in the *khuṭba* and *sikka*. It was also at this juncture that Shaykh Ḥasan introduced his first comprehensive anonymous coinage (known dated 755–57), which is extant from mints in Lur Buzurg with the date 756, four specimens being represented in the Abgarians material (nos. 8, 9, 12, 14).[27] These coins not only suggest a switch of allegiance on the part of the atabeg from Abū Isḥāq to Shaykh Ḥasan, but also show the adoption of the Jalāyrid silver standard of ʿIrāq ʿArab of 15 *qīrāṭs*. Since the weight standards of later fourteenth-century Iran were tied to fixed monetary regions, such a change is

[26] This type was later imitated by Shaykh Uways, who struck anonymous coins at Ḥilla in 759 which copy closely the obverse type of Nūr-Āward's first coinage, even to the extent of placing the mint formula, *Ḍarb-i Ḥilla*, in the central line of the obverse inscription, in lieu of the ruler's name. The reverse is, however, entirely different, and the coin is struck to the contemporary Jalāyrid standard of 15 *qirāṭs*, employed from 755 until the introduction of the reformed coinage in 762.

[27] The adoption of the anonymous type of Shaykh Ḥasan Buzurg, without any characteristic deviation, was tantamount to placing his name on the coinage, and therefore a sign of the acceptance of Jalāyrid suzerainty. Shaykh Ḥasan's name would only have appeared on the Luristānī coins if it were already on the coins struck in his own territories. Since that was not the case, the adoption of the anonymous type serves in lieu of the more usual practice of inscribing the actual name (see S. Album, "Power and Legitimacy: The Coinage of Mubāriz al-Dīn Muḥammad ibn al-Muẓaffar at Yazd and Kirmān," *Le Monde Iranien et l'Islam*, 2 [Geneva, 1974], pp. 158–59).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

quite remarkable, and with scarcely any other parallel.[28] This change suggests that the atabeg intended more than a nominal change of allegiance, but sought to ensconce himself firmly in an alliance with the Jalāyrid, in face of a new and potentially more dangerous enemy to the east, Mubāriz al-Dīn.[29]

[28] The only other example that comes to mind is the city of Rayy, which passed repeatedly between the Jalāyrid, Sarbadārid (or Walid), and Muẓaffarid spheres of influence, and altered its coinage on several occasions to comply with the standards of those regions (data mainly from unpublished specimens in various collections). But Rayy was exceptional, for it lay virtually at the junction of three monetary zones, those of Tabrīz, Shīrāz, and Nīshāpūr. Its tumultuous history is recorded mainly by Ḥāfiẓ-i Abrū.

The more frequent procedure of dealing with a change in ruler or suzerain was to retain the standard, but adopt a type bearing the name (or anonymous type) of the new suzerain. An example of this is the coinage of Shāh Maḥmūd Muẓaffari, brother of Shāh Shujāʿ, during his ascendancy in 766–68/1364–67.

During the later fourteenth century, Iran seems to have been divided into four monetary zones, each of which employed its own standards and saw its own sequence of weight reductions in the silver coinage. The four regions may be termed the Baghdādī, Tabrīzī, Nīshāpūrī, and Shīrāzī, after their chief cities. The boundaries of the regions remained static, and persisted in spite of political developments that at times found a given region divided among several rulers, and at other times, lumped together with all or parts of one or more other regions in a single political entity. In the latter case, it was normal for the ruler to maintain separate types and standards in each region. Lur Buzurg normally went together with the Shīrāzī region, except for the second coinage of Nūr-Āward, which was a Baghdādī issue, and the maverick third issue, which is the solitary known example of a local standard differing from those in each of the four established regions. As for the naming of the regions by their chief cities, there is precedent for this in a report by al-ʿUmarī, preserved by Qalqashandī, Abū'l-ʿAbbās Aḥmad b. ʿAlī al-Qalqashandī, *Subḥ al-Aʿshā fī Ṣanāʿa al-Inshā'*, 4 (Cairo, 1964), p. 422; this report notes only three of the four zones, omitting the Shīrāzī, probably because it was not yet differentiated from the Nīshāpūrī at the time of al-ʿUmarī's observation.

[29] That Nūr-Āward should have aided Abū Isḥāq even after seeking Jalāyrid suzerainty does not present any inconsistency, for the Jalāyrid and Înjūyid rulers seem at that juncture to have been on friendly terms, as indicated by Shaykh Abū Isḥāq's willingness to seek Jalāyrid aid for his ill-fated enterprises. There is empirical evidence that Nūr-Āward's attempt to enter the Baghdād monetary zone was a failure. Had it succeeded and had trade persisted between Lur Buzurg and either Khūzistān or ʿIrāq ʿArab, we should expect to find an admixture of coins minted in

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

In the meantime, during a winter respite between two Muẓaffarid sieges of Iṣfahān (winter 755–56/1355), Shaykh Abū Isḥāq left his deputy, Jalāl al-Dīn Mīr-Mīrān, in charge of Iṣfahān and went to Luristān to recruit the aid of Nūr-Āward. In the spring (second quarter 756/1355), Shāh Shujāʿ returned to Iṣfahān to resume the siege. As Abū Isḥāq headed back toward Iṣfahān, Shāh Shujāʿ marched out to intercept him and his Lur allies, meeting them in an engagement at Fīrūzān (mid-756/1355), in which Abū Isḥāq was routed and forced to flee to Shūshtar, then a dependency of Shaykh Ḥasan. The Lur contingents dispersed and fled homeward.[30] Meanwhile, however, Mīr-Mīrān had bribed Shāh Shujāʿ to lift the siege for the remainder of the year.[31] Later, toward the beginning of 757/1356, Mubāriz al-Dīn sent his brother-in-law, Shāh Sulṭān, to lower the siege once again. The latter soon gained entry to the city, with the complicity of the *kūlwāl* of Iṣfahān's principal fortress, Qalʿa-yi Ṭabarak. Mīr-Mīrān fled to Kāshān, but Abū Isḥāq was captured, taken to Shīrāz, and executed there on 21 Jumādā I 757/22 May 1356.[32]

---

those provinces together with the Nūr-Āward issues of the second and third types. Such does not appear to be the case. To the contrary, Muẓaffarid issues are present; even if this were the result of coins being taken as booty or tribute into Muẓaffarid territories, it is nonetheless the absence of Khūzistānī and ʿIrāqī issues which is significant.

[30] Kutubī, p. 46.

[31] Kutubī, p. 46. Kutubī fails to mention that Shāh Shujāʿ was the recipient of the bribes, but later sources are more explicit, for example, Khwānd-Amīr, vol. 3, p. 290. Kutubī's reticence is understandable, for his account is essentially an abridgment of the florid *Mawāhib-i Ilāhī* of Muʿīn al-Dīn Yazdī, a laudatory account heavily biased in favor of Shāh Shujāʿ.

[32] The date of Abū Isḥāq's execution has been the subject of considerable uncertainty, and has usually been given as 758 (see E. K. M. von Zambaur, *Manuel de généalogie et de chronologie pour l'histoire de l'Islam* [Bad Pyrmont, 1955], p. 255, and S. Lane-Poole, *The Mohammedan Dynasties* [Westminster, 1894], p. 249). The matter has been treated at length by Qāsim Ghanī, who, drawing upon numerous sources, concluded in favor of 757 (*Baḥth dar Āthār wa Afkār wa Aḥwāl-i Ḥāfiẓ*, 1: *Tārīkhi-ʿAṣr-i Ḥāfiẓ* [Tehran, n.d.], pp. 119–21). My own investigation of the sources corroborates Ghanī's conclusion, as does the numismatic evidence, although that is still too sparse to be conclusive.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

At the same time that Mubāriz al-Dīn sent Shāh Sulṭān against Iṣfahān, he and his two sons, Shāh Maḥmūd and Shāh Shujāʿ, prepared to launch a punitive campaign against Nūr-Āward, and departed from Shīrāz in Muḥarram 757 / January 1356.[33] Earlier, Mubāriz al-Dīn had sent a number of prestigious envoys in an endeavor to dissuade Nūr-Āward from granting assistance to Abū Isḥāq, but he now chose to intervene militarily because of Nūr-Āward's persistence and subsequent actions. When Nūr-Āward learned of the approach of the Muẓaffarid force, he dispatched Kayūmarth b. Takla to intercept Mubāriz al-Dīn; but Kayūmarth was defeated by the Muẓaffarid near Bihbihān, in the region of Kūhgīlūya. On the following day, Pashang b. Yūsuf Shāh, accompanied by some of the notables of Lur Buzurg who had become disturbed by the haughty behavior of Nūr-Āward, entered the camp of Mubāriz al-Dīn seeking the latter's support. Hearing this, Nūr-Āward fled to the fortress of Sawsan. Mubāriz al-Dīn marched to Aydhaj with Pashang, and deputed Shāh Shujāʿ to reduce Sawsan. Pashang was then invested with the governorship of Lur Buzurg on behalf of the Muẓaffarids. Nūr-Āward was soon captured, brought to Aydhaj and blinded there in Ṣafar 757 / February 1356. With a friendly ally in Aydhaj, Mubāriz al-Dīn and Shāh Shujāʿ returned to Shīrāz.

The problem is whether to assign the third coin type to Nūr-Āward, prior to his defeat at Muẓaffarid hands, or to Pashang, after his accession in Ṣafar 757, but before his adoption of Muẓaffarid coin types, also in 757. Careful consideration of the evidence makes it apparent that Nūr-Āward must have been the issuer. First of all, the issue is struck to a weight standard of 14 *qīrāṭs* (ca. 2.52 g), reduced from the 15-*qīrāṭ* standard of Shaykh Ḥasan; this standard is observed only in Lur Buzurg and only for this type. Shaykh Ḥasan himself continued to use the 15-*qīrāṭ* standard until his death in 757, as did his son and successor, Shaykh Uways, until his coinage reform of 762. On the other hand, Abū Isḥāq and Mubāriz al-Dīn were still using an 18-*qīrāṭ* standard

[33] The details of this incident, including the texts of messages exchanged, are preserved in the *Mawāhib-i Ilāhī* (ff. 158a–164a), whose author, Muʿīn al-Dīn Yazdī, was an eyewitness to the events. An abridged version is preserved by Kutubī, pp. 50–52.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

(3.26 g, together with third dinars of 1.08 g / 6 *qīrāṭs*) as late as 756, reduced by Mubāriz al-Dīn to 16 *qīrāṭs* in 757. This 16-*qīrāṭ* standard, survived the deposal of Mubāriz al-Dīn by his sons in 759 and was only discontinued by Shāh Shujāʿ in 762.[34] Second, the type is quite distinctive, bearing no resemblance to any other fourteenth-century Iranian issue, and is found only in the six Lur Buzurg mints, all of which are represented. Finally, lots in which coins of this type have occurred also contain coins of the Jalāyrid type (755–57) struck in Lur Buzurg mints (but never such coins from mints in ʿIrāq ʿArab) and, as well, a sprinkling of coins of Mubāriz al-Dīn and Shāh Shujāʿ. This would imply that the coins were dispersed only toward the east, either in trade with merchants residing in Muẓaffarid territory, as tribute to Mubāriz al-Dīn, or as booty carried back by Mubāriz al-Dīn and Shāh Shujāʿ from Luristān. Given the divergence in weight standard from coins circulating within Mubāriz al-Dīn's territories, the last possibility seems most plausible.

On the basis of this evidence, several arguments would suggest that Nūr-Āward was the issuer of this type. First of all, the type is not a Muẓaffarid one, and it is highly improbable that Pashang would have defied his Muẓaffarid protector, to whom he owed his throne, by striking coins that reflect both a Jalāyrid standard and a non-Muẓaffarid design. The evidence is to the contrary: Pashang did strike in Mubāriz al-Dīn's name at once; Muẓaffarid coins of Aydhaj dated 758 and of Bāzuft dated 757 are known. It is logical to assume, and there exists no contravening evidence, that Pashang at once began to utilize Muẓaffarid types for his coinage.[35]

[34] It would be altogether unacceptable to assume that Mubāriz al-Dīn reduced the standard from 18 to 14 *qīrāṭs* early in 757/1356, and then raised it to 16 *qīrāṭs* later in the same year. This would not only be without precedent, but would contradict the very purpose of the weight reductions, which must have been to increase the monetization of the economy by means of an artificial increase in the price of silver as expressed in terms of gold.

[35] Mubāriz al-Dīn gave the *bayʿa* to the Cairene ʿAbbāsid caliph in 755/1354, while encamped outside the walls of Iṣfahān. It was at this time that he added his own name to the *khuṭba* and *sikka*, along with that of the caliph al-Muʿtaḍid (Album,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Second, a reduction in standard, coupled with a sizable volume of output, ordinarily accompanies times of extraordinary expense, usually of a military nature. The purpose of this policy was to "stretch" the available supply of silver bullion, that is, of cash reserves, by reducing the weight of the silver dinar and declaring its fiat value to be the same as that of the former, heavier coin; the difference was probably added to the seignorage. We know that such an extraordinary need for cash must have existed in Muḥarram 757 / January 1356, for Nūr-Āward had rapidly to mobilize an army capable of withstanding the Muẓaffarid onslaught. Nūr-Āward was not especially popular among the notables of his own kingdom; it would appear that his only chance to purchase their loyalty and to raise a substantial armed force, largely from the ranks of the personal armies of these notables, together with tribal irregulars, was to lavish upon them vast sums of cash. For this purpose, a special issue was authorized, and in order to increase the fiat value of the silver in the treasuries, the dinar was decreased in weight.

Once again, from Pashang's point of view, there could be no reason for a large issue on a reduced standard, for Pashang mounted the throne with strong support from his subjects and without the need to raise a huge army. Admittedly, he must have been required to pay tribute to Mubāriz al-Dīn, but this could have been paid in kind or in uncoined bullion, as well as with older coin still held in the atabeg's coffers. In any case, had new coin been struck to fulfill the obligation of tribute, it would surely have been on the Muẓaffarid weight standard, and of Muẓaffarid type, as a conspicuous display of allegiance. Thus the evidence of the reduced standard must be interpreted in favor of Nūr-Āward as the promulgator of these coins.

Third, this reduction of standard is a unique phenomenon. It appears to be the only attested fourteenth-century example of a reduction ordered by one of Iran's lesser rulers thus far discovered, and was not immediately adopted throughout one or more entire monetary regions. I would suggest that this reflects an endeavor on the part of its issuer

---

"Power," pp. 167–68). The earliest coin bearing the name of Muḥammad is dated 756 (SA, unpublished) and amends Album, "Power" which records 757 as his earliest coin.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

to exercise greater independence. Iran was still politically fragmented during the 750s/1350s, and it was not until the beginning of the following decade that the smaller units carved from the former Īlkhānid empire achieved some stability. The ambitious Nūr-Āward hoped to seize as large a stake as possible in the new order. It was in the pursuance of this end, so abruptly snatched from his grasp by Mubāriz al-Dīn, that he utilized revolutionary measures in his monetary policy. Pashang, on the other hand, remained loyal to the Muẓaffarid cause, almost until his death in 791/1389 or 792/1390—his conflicts with Shāh Manṣūr breached that loyalty ca. 790/1388—and was not the sort of adventurer who would embark on a revolutionary program. His own extensive coinage, never radically varying from the Muẓaffarid norms, shows his unerring allegiance to the ruler of Shīrāz.

Fourth, if, as we have suggested, the coins were brought back by the Muẓaffarid contingents as booty, then they must have been struck prior to the campaign, that is, prior to Pashang's accession.

Certain objections to these arguments merit discussion. The most obvious is that the 757 date would at first glance weigh in favor of Pashang, who occupied the throne for some 10 1/2 months of that year. However, the brevity of Nūr-Āward's power in that year does not militate strongly against his being the issuer. Such a presupposition would assume that coin production was evenly distributed over the year, and that roughly proportional numbers of each issue survived over the centuries. Neither assumption is necessarily valid, and relevant counter-examples are many. For example, in 789/1387, Tīmūr occupied the city of Shīrāz, after the Muẓaffarid ruler, Zayn al-ʿĀbidīn, had fled to Khūzistān. We have two Tīmūrid issues of that year from the Muẓaffarid territories; both must have been struck in the last two months of that year. The later and more profuse issue, probably intended for tribute obligations, could only have been struck in the last 20 days of the year.[36] Proper Muẓaffarid issues of 789 have yet to be discovered, and there appears to have been no cause for a special issue after that

[36] For example, *BMC* vol. 10, no. 18m and 18t, of the first and second types, respectively.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

which occurred in the previous year.[37] Thus, despite, the fact that Zayn al-ʿĀbidīn ruled more than 10 months in Shīrāz in 789, the extant coinage is entirely from the last 2 months of the year. Special coinages, particularly those involving a reduction in weight, require recoinages and thus create periods of abnormally high mint output.[38] The day-to-day function of the mint, that is, the conversion of private bullion into coin, was small in comparison with these extraordinary issues. Moreover, the large numbers of late fourteenth-century Iranian coins examined provide evidence that this pattern was far more pronounced during the latter part of the century than during the reigns of Ūljāytū and Abū Saʿīd, which formed the bases of Smith's study.[39]

As for the survival rate of coins, it is rarely proportional, but is affected by circumstances which encourage the concealment of coin hoards in the ground, such as times of war or occupation, supplemental tax levies, food riots, or palace intrigue and concomitant factional strife. In particular, a large emission struck before a military campaign was likely to have found its way, to an unusual extent, into buried deposits, as insurance in case of defeat, or as soldiers' private acquisitions kept from public view. It would therefore survive in disproportionately plentiful numbers.

[37] The 788 issues are not especially common, particularly with legible date. For an example from Shīrāz, see *BMC* vol. 10, no. 683ee, p. 137. Note that the case of Tīmūr's takeover from Zayn al-ʿĀbidīn is altogether different from the example at hand, and was one in which there was no need to assume that the weight reduction and the introduction of new types had to occur prior to the conquest, for Zayn al-ʿĀbidīn had not tried to mobilize his forces, but fled forthwith, without evincing a shred of resistance.

[38] For evidence of the tendency for coin output to surge immediately upon the promulgation of a new type and/or standard, see Smith, pp. 30–31, Table 3, and Graph A.

[39] An alternate possibility is that the date of each new coinage tended to be retained for the duration of the issue. Thus, for example, a coinage introduced in 764 and maintained until 768 would nonetheless always bear the year 764. If such were the case in 788, the lack of 789–dated coins of Zayn al-ʿĀbidīn could be explained by the continued use of 788-dated dies. However, I am loath to accept such a theory, since for many late fourteenth-century issues intermediate dates are known and are not necessarily even rare. For example, the 780 issue of Sultan Ḥusayn consists largely of coins dated 780, but occasional specimens dated 781, 782, and 783 are known, though quite rare.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Another objection which might be raised is that the change of type from that of Shaykh Ḥasan, prior to his death in Rajab 757/July 1356, could be viewed as reflecting the adoption of Muẓaffarid suzerainty by Pashang. However, the change is readily explained by the concomitant weight reduction, which provided an unequivocal means of distinguishing the light from the heavy coin. As early as 713/1313-14, the Īlkhānids had instituted a policy of always carefully separating new and old coin, especially when the former was lighter than the old, by a change in type comprehensible even to illiterates. Since Shaykh Ḥasan did not simultaneously reduce his standard, a change of type was imperative. But why would Nūr-Āward abandon the symbol of allegiance to Shaykh Ḥasan? Undoubtedly, he could see no further utility in its perpetuation, as Shaykh Ḥasan had apparently failed to offer aid to Nūr-Āward in opposing Mubāriz al-Dīn. Moreover, his own ambitions to expand into Khūzistān, already heavily populated with Lur tribesmen[40] but nonetheless a Jalāyrid dependency, clashed with those of Shaykh Ḥasan, and made inevitable the renewal of conflict over that quarter.

The reign of Nūr-Āward is a noteworthy interlude in the history of the atabegs of Lur Buzurg. He attempted to utilize the general unrest that overwhelmed Iran following the disintegration of the Īlkhānid Empire. At first seeking alliance with whichever of his neighbors appeared strongest, so as to protect himself against them and to benefit from their proximity, he later sought to strike out on his own. This progression is mirrored in his coinage, which substantially augments the meager historical portrait of his reign preserved in the written texts, and enables understanding his situation among the greater powers about him. Like that of so many of his contemporaries, his effort terminated in failure. With the accession of Pashang, the atabegate of Lur Buzurg was once again reduced to a minor enterprise, its autonomy protected by its mountainous location, a useful ally of Shīrāz with no particular ambitions of its own.

[40] Rashīd al-Dīn, p. 179.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CATALOGUE OF THE COINS

I have tried to list all specimens of the three coinages of Nūr-Āward known to me, which are in various public and private collections. The coins from the Abgarians hoard appear in the list as nos. 8, 9, 12, 14, 15, 16, 17, 28, 29, 30, 31, and A and are illustrated.

TYPE 1 COINAGE

Anonymous coins bearing the title of the "Supreme Sultan."

1. *Aydhaj*, 751 Æ 3.37 g (SA)

Obv.: within ornamented pentafoil:

السلطان الاعظم
ضرب ايذج
خلد الله ملكه

around, in five segments,

.../(ا)حدى/خمسين سبعما/...

Rev.: within mihrab-shaped cartouche:

.....
محمد
رسول‌الله

to l., r., and below, obliterated.

2. *Aydhaj/Lur Buzurg*, 752 Æ 3.33 g (BM)

Obv.: within pointed pentafoil:

السلطان خان الاعظم
ضرب ايذج
خلد الله ملكه

around, in five segments (ornament in first segment),

.../.../اثنى و/خمسين /... (orn.)

Rev.: within mihrab-shaped cartouche:

الله
لااله الا
محمد
رسول الله

to l.: ...
to r: عثمان على
below, in two segments,
ضرب لر/بزرك

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

3. 752 Æ 3.35 g (IB)

As 2 (few portions missing); top line of obverse reads:

السلطان الاعظم خان

4. 752 Æ looped, weight not available. (Collection of D. Burns, Mainz, Germany.)

As 2; partially worn and mutilated.

5. 754 Æ 3.07 g (BN)

Obv.: as 2; enclosed in plain pentafoil. Margin reads:

... /سنة /اربع /خمسين سبعمائة

Rev.: within plain right-angle diamond:

الله
لا اله لا
محمد
رسول الله

surrounded by Rāshidūn

6. Date obliterated. Æ 3.09 g (SA)

As 5; date obliterated.

7. *Lur Buzurg* (*no Aydhaj*), date missing. Æ 3.33 g (IB)

Obv.: within pointed pentafoil:

السلطان الاعظم خان
ضرب
خلد الله ملكه

around, in five segments,

ضرب /... /خمسين /... /...

Rev.: as 2; large portions missing. Bottom part reads, in two segments:

ضرب ... /...رك

Note absence of mint name Aydhaj. May be the earliest issue of Nūr-Āward; the sole use of the name Lur Buzurg was characteristic of the earlier coinage of this mint; the name Aydhaj was first observed in 751 (no. 1 above).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TYPE 2 COINAGE

Coins of the type of the Jalāyrid ruler, Shaykh Ḥasan, anonymous, but of type identical to Shaykh Ḥasan's coinage in Baghdād and other Iraqi mints.

*8. *Aydhaj*, (7)56 Ⱥ 2.68 g (ANS, Abgarians hoard)

Obv.: in central area:
ضرب
ايذج
around, forming a square, in Kufic script,
محمد رسول الله صلى الله عليه
around, beginning at the top,
ابو بكر/وعمر/وعثمان/وعلى

Rev.: in area, in square Kufic:
لا اله الا
الله وحده
لا شريك له
around, in four segments,
سنة/ستة/خمسين/...

*9. (7)5x Ⱥ 2.64 g (ANS, Abgarians hoard)

Obv.: as 8; part of marginal legend missing.

Rev.: as 8; margin:
.../خمسين/(؟)ستة/...
(digit may be *sabʿa* [7], but is largely off flan and very weak)

Both dies differ from 8.

10. 756 Ⱥ 2.63 g (SA)

Obv.: as 9.

Rev.: as 8, marginal legends more complete.

11. *Bāzuft*, 75x Ⱥ 2.71 g (SA)

Obv.: as 8; in center:
ضرب
بازفت
Rāshidūn only partially showing.

Rev.: as 8; margin:
.../...اخمسين/سبعا ...

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*12. *Kūh Gīlūya*, 7xx Æ 2.82 g (overweight) (ANS, Abgarians hoard)

Obv.: as 8; in center:

ضرب
كوه
كيلو

Rāshidūn partly off flan.

Rev.: as 8; margin largely missing:

... /... /... / سبعمائة

13. (7)56 Æ 2.67 g (SA)

Obv.: as 12; center partly obliterated:

ضرب
كوه
.....

Rev.: as 8; margin:

... /ستة /خمسين /...

*14. *Uncertain mint*, 756 Æ 2.65 g (ANS, Abgarians hoard)

Obv.: as 8; in center:

ضرب
برو
نوكم (؟)

Rev.: as 8; margin:

سنة /ستة /خمسين /سبعا ...

Mint name is probably a barbaric version of "Kūhgīlūya."

TYPE 3 COINAGE

Anonymous coins of the characteristic type of the atabeg, datable to 757 H.

The following conventionalized spellings invariably appear: عد in place of عند; الملك in place of مالك; and لامين in place of الامين. Because these variants are always present, they are not specifically noted in each description. This conventionalization may have been due to the carelessness or illiteracy of the die cutter, or may have been intended as a secret mark.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*15. *Aydhaj*, 7(5)7 Æ 2.50 g (ANS, Abgarians hoard)

Obv.: within plain circle:
محمد رسو
ضرب
ل الله صادق
ايذج
الحق عند الا ...

around,
ابو بكر/.../.../...

Rev.: within plain circle:
لا اله الا
الله مالك
الحق المبين

around,
سنة/سبع/.../سبعمائة

*16. 75x Æ 2.51 g (ANS, Abgarians hoard)

Obv.: within plain circle:
محمد رسو
ضرب
ل الله صادق
ايذج
الحق عند الا مين

around, illegible.

Rev.: within plain circle:
لا اله الا
الله مالك
الحق المبين
خمسين

around,
سنة/.../خمسين/سبعمائة

*17. Date missing. Æ 2.45 g (ANS, Abgarians hoard)

Obv.: within plain circle:
محمد رسو
ضرب
ل الله صادق
ايذج
الحق عند الامين

around,
ابوبكر/.../.../..ى

Rev.: within plain circle:
لا اله الا
الله مالك
الحق المبين

around,
سنة/.../.../سبعمائة

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

18. 7(5)7 Æ, weight not available. (HA)

Obv.: within plain circle:

محمد رسو
ضرب
ل الله صادق
ايذج
الحق عند الامين

around,

ابو بكر/.../وعثمان/...

Rev.: within plain circle:

لا اله الا
اللهمالك
الحق المبين

around,

سنة/سبعة/.../سبعمائة

Description is a composite of 18 and 19, which are from the same pair of dies.

19. (75)7 Æ, weight not available. (HA)

From same pair of dies as 18.

20. 75x Æ, weight not available. (HA)

Obv.: within plain circle:

...حمد رسو
ضرب
ل الله صادق
ايذج
الحق عند الامين

around,

ابو .../على/عثمان/...

Rev.: within plain circle:

لا اله ...
الله ...
الحق ...

around,

.../.../...سين /سبعمائة

Obverse and reverse dies different from 18–19.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

21. Date missing. AR, weight not available. (HA)

Obv.: within plain circle:

محمد رسو
ضرب
ل الله صادق
ايذج
الحق عند الامين

around,

.../وعمر/وعثمان/و على

Rev.: within plain circle:

لا اله ...
الله مال...
الحق المبين

around,

سنة/.../.../سبعمائة

Obverse and reverse dies different from 18–20; description of obverse is a composite of obverses of 21–23, all of which are struck from the same die; note that each of 21–23 has a different reverse die.

22. (75)7 AR 2.34 g (SA)

Obv.: as 21 (same die).

Rev.: within plain circle:

لا اله الا
الله مالك
الحق المبين

around,

.../سبعة/خمس.../...

23. 757 AR 2.36 g (SA)

Obv.: as 21 (same die).

Rev.: within plain circle:

لا اله الا
...له مالك
.....

around,

سنة/سبعة/.../...

24. Date missing. AR, weight not available. (In the collection of H. Westphal, Berlin.)

Type of 15–23, description not available.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

25. Date missing. *Æ* 2.47 g (Collection of K. Brown, Stockton, California.)

Type of 15–23, description not available.
Three additional specimens of Aydhaj, date missing, of Type 3 (similar to 15–25) were in the possession of a dealer in Cleveland, Ohio. Their present whereabouts is not known.

26. *Bāzuft*, (75)7 *Æ*, weight not available. (HA)

Obv.: within plain circle (?):

.....در سو
ضرب
ل الله صادق
بازفت
...ق عند الامين
around, illegible.

Rev.: within plain circle:

لا اله الا
..له مالك
.....
.....
around,
.../.../سنة/سبعة

Description is a composite taken from 26 and 27, which are both from the same pair of dies.

27. Date missing (but 757 by die linkage). *Æ* 2.42 g (SA)

From same pair of dies as 26.

*28. 7xx *Æ* 2.42 g (ANS, Abgarians hoard)

Obv.: within plain circle:

محمد ر سو
ضرب
ل الله صادق
بازفت
...ق عند الامين
around,
... بكر/وعمر/.../...

Rev.: within plain circle:

لا اله الا
الله مالك
الحق المبين
around,
سنة/.../.../سبعة

Note that "700" is written as "7".

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*29. *Gandumān*, (7)57 Æ 2.47 g (ANS, Abgarians hoard)

Obv.: within plain circle:
محمد رسو
ضرب
ل الله صادق
كند مان
.....
around,
ابو بكر/.../.../على

Rev.: within plain circle:
... له الا
الله مالك
الحق المبين

around,
.../سبعة/خمسين/...

*30. *Kūhgīlūya*, (7)57 Æ 2.50 g (ANS, Abgarians hoard)

Obv.: within plain circle:
..... رسو
ضرب
...صا دق
كوكيلو (sic)
... عند ...
around, illegible.

Rev.: within plain circle:
.....
..... مالك
الحق المبين

around,
.../سبعة/خمسين/...

*31. *Lūrdijān*, date missing. Æ 2.45 g (ANS, Abgarians hoard)

Obv.: within plain circle:
.....
ضرب
ل الله صادق
لر دجان (*sic*)
الحق عند الامين
around, illegible.

Rev.: within plain circle:
..... له الا
...له مالك
..... المبين

around,
.../.../[سبعة]/...

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

32. *Rāmuz*, (75)7 Æ, weight not available. (HA)

Obv.: within plain circle:

محمد رس...
ضرب
ل الله صادق
رامز
... عند ...

around,

ابو بكر/.../.../على

Rev.: within plain circle:

... اله الا
الله مالك
الحق المبين

around,

.../سبعة/.../...

33. Mint missing. 75x Æ, weight not available. (HA)

Obv.: within plain circle:

محمد رسو
ضرب
....له صادق
.....
.....

around,

ابو بكر/على /.../...

Rev.: within plain circle:

لا ال.....
الله مال....
الحق المبين

around,

.../.../خمسين سبعمائة

COIN FROM THE ABGARIANS HOARD WHICH IS NOT AN EMISSION OF THE ATABEG:

*A. *Mubāriz al-Din Muḥammad* (*Muẓaffarid*), *Iṣfahān*, 7xx Æ 2.49 g (ANS)

Obv.: apparently within plain hexafoil:

بالله
المعتصم
ضرب اصفها [ن]
السلطان محمد ...
خلد الله ...

around, in six segments,

.../.../.../... سبعا (*sic*) /ئة

Rev.: within plain square:

الله
لا اله الا
محمد
رسول الله

around, the names of the Rāshidūn.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

REDISCOVERY OF JOSEPH WRIGHT'S MEDAL OF GEORGE WASHINGTON

(PLATES 26-28)

J. D. BRADY

In 1974 an unattributed piece turned up in Philadelphia and was presented to the American Numismatic Society by Henry Grunthal. The piece is about 2 inches in diameter, about 1/8 inch thick, and weighs 35.7 grams, with a specific gravity of 7.78. To judge from the darkened surface, and in terms of the specific gravities of pure lead (11.3) and pure tin (7.3), this seems to be of pot metal (PLATE 26, 1). [1] The obverse is die struck and shows the profile of a man facing right with hair drawn back informally into a queue at the nape of his neck. He is dressed in a high neckcloth, an unbuttoned waistcoat, and a military coat with the facings buttoned back. The reverse has a dished impression that does not correspond to the raised portion of the obverse. Eric P. Newman has suggested in conversation that the blank of this piece was placed on a similar medal, also with portrait to the right, in order to raise the blank into the die for uniform striking. Positive identification is difficult as this brockage on the reverse has been effaced by tooling. Incised on the reverse in italic letters is: "Jos. Wright." To judge from the rough treatment of the reverse and edge, this seems to be a trial strike from a single die.

[1] The substance of this paper was first presented at the educational forum of the Grand Central Coin Convention on 5 November 1976, in New York City. I am grateful to Don Taxay for reviewing my argument in its early stages, and to Eric P. Newman's observations at the end. Margaret Filgate Smith and Jean B. McCormick volunteered information form their own research on Patience Wright. Above all I am grateful to Esther Fisher Benson for information on the "Richardson/Smith" wax medallion from the time it was in her keeping in the late 1930s.

The specific gravities of lead and tin are quoted from E. R. Caley, *Analysis of Ancient Metals* (New York, 1964), p. 124.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

If the reverse inscription is to be trusted, this piece is to be attributed to Joseph Wright (1765–93), the first engraver at the United States Mint.[2] Known works from his hand include a series of life portraits and replicas of Benjamin Franklin and George Washington,[3] as well as dies for the eagle-on-globe pattern quarter dated 1792 (PLATE 26, 2), the liberty-cap cent dated 1793, and the undated medal executed at about the same time for presentation to Henry Lee for the capture of Paulus Hook in 1779 (PLATE 26, 3).[4] If this inscription is authentic and reliable, this newly discovered piece is the fourth known example of die-work from Wright's hand.

What about the subject of the portrait? Although the piece came without any attribution, there is no difficulty in recognizing the large sloping brow, the prominent cheek-bones, the deeply recessed eye sockets, and the prominent nose of George Washington. While such a provisional attribution seems simple enough, a full demonstration re-

[2] The best single account of Wright is by F. Kimball, "Joseph Wright and his Portraits of Washington. [1] Paintings and Engravings," *Antiques*, vol. 15, no. 5 (May 1929), pp. 376–82 and [2] "Sculpture," *Antiques*, vol. 16, no. 1 (January 1930), pp. 34–39. Also useful are C. Lee, *Early American Portrait Painters* (New Haven, 1929), pp. 225–45, including documents not recapitulated by Kimball; and G. S. Chamberlain, "Joseph Wright, First Draughtsman and Die-Sinker to the United States Mint," *Num*, vol. 67, no. 12 (December 1954), pp. 1282–87.

[3] See C. H. Hart, "An Original Portrait of Doctor Franklin Painted by Joseph Wright, Belonging to the Royal Society, London," *Pennsylvania Magazine*, vol. 32, no. 7 (July 1908), pp. 320–34. The Washington portraits are reviewed in detail below.

[4] For Wright's die-work see D. Taxay, *The U. S. Mint and Coinage* (New York, 1966), pp. 75–77, 105, 123. Taxay's definitive attribution of the pattern quarter to Wright was made in "The Origin of the 1792 Eagle-On-Globe Pattern," *WNJ*, vol. 3, no. 1 (January 1966), pp. 19–23 and recapitulated in *The Comprehensive Catalogue and Encyclopedia of U. S. Coins* (New York, 1966), pp. 187 and 195, nos. 6:A-D (6 specimens). For Taxay's attribution of the liberty-cap cent of 1793 to Wright on the basis of style, see *The U. S. Mint*, p. 77, and *The Comprehensive Catalogue*, p. 67.

For the Lee medal, see J. F. Loubat, *The Medallic History of The United States of America, 1776–1875*, 1 (New York, 1878), pp. 29–36 and vol. 2, pl. 6; and V. and E. Clain-Stefanelli, *Medals Commemorating Battles of the American Revolution* (Washington, D.C., 1973), pp. 19–20, and 43.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

quires a thorough review of Wright's work and Washington's iconography.[5]

Although Wright's life has not been written up in full, there is generous documentary evidence from contemporary sources, especially on his relations with Washington. According to William Dunlap, who knew Wright as a young man and had access to Wright's family papers when he published a brief biographical account in 1834, Joseph Wright was born on 16 July 1756, in Bordentown, New Jersey. "After the death of his father, his mother about the year 1772, carried him with other children to London; she became famous for her modelling in wax, and was enabled to give Joseph a good education."[6] In July 1782 Wright was in Paris at work on a portrait of Benjamin Franklin.[7] He sailed for America in October, and after a shipwreck arrived in Boston without a penny in February 1783.[8]

Patience Lovell Wright (1725–86), Joseph's mother, was well known at the time not only as a highly proficient modeller in wax, but also as an outspoken American patriot in London. A drawing of 1777 showing her in a liberty cap presages the famous type of "Libertas Americana" commissioned by Franklin and finished in 1783.[9] The type, as is well known, was adapted to the coinage of the United States by her son in 1793. Certainly her opinions and possibly her clandestine activities

[5] The standard work on the iconography of Washington (excluding sculpture) is J. H. Morgan and M. Fielding, *Life Portraits of Washington and Their Replicas* (Philadelphia, 1931), which does not entirely replace E. B. Johnston, *Original Portraits of Washington Including Statues, Monuments, and Medals* (Boston, 1882). More voluminous but unreliable is G. A. Eisen, *Portraits of Washington*, 3 vols. (New York, 1931–32).

[6] W. Dunlap, *History of the Rise and Progress of the Arts of Design in the U. S.* [New York, 1834], ed. F. W. Bayley and C. E. Goodspeed (Boston, 1918; repr. with introduction by J. T. Flexner, New York, 1965, 1969): vol. 1, pp. 312–15 gives a brief biography of Wright, this passage from p. 312; an autobiographical section, pp. 252–55, has fuller information for 1783.

[7] Letter of Patience Wright to Benjamin Franklin, 30 July 1782, printed by C. C. Sellers, *Patience Wright, American Artist and Spy in George III's London* (Middleton, Conn., 1976), p. 161.

[8] Dunlap, p. 313; whence Kimball, "Paintings and Engravings," p. 378.

[9] Drawing by J. Downman, repr. in Sellers, p. 58; "Libertas Americana" described as "just finished" in letter of Franklin, 17 March 1783 (Loubat, vol. 1, no. 14, p. 90).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

would have recommended her to Franklin's attention, and to this connection Joseph Wright owed the start of his career in America. Another useful connection was Francis Hopkinson, who encouraged Patience Wright in Bordentown between 1769 and her removal to London in 1772,[10] and was an intermediary between Joseph Wright and Thomas Jefferson in 1784.[11]

On Joseph's arrival in America, the Revolutionary War was in its last troubled stages. From his headquarters on the Hudson at Newburgh, General Washington wrote grimly on 4 March: "The sufferings of a complaining Army on one hand, and the inability of Congress and the tardiness of the States on the other, are the forebodings of evil."[12] But on 26 March news reached Washington that finally peace was in effect between America and Britain. From then until the middle of August Washington stayed in New York State, inactive but necessarily watchful until the British should leave New York City. The Congress's lack of funds to pay off the Army led to rioting in Philadelphia in June, and on 21 June Congress adjourned for safety to Princeton. By 18 July things were calm enough for Washington to leave Newburgh for a tour of upper New York State. After his return to Newburgh on 4 August Washington received a letter from Congress asking him to appear in Princeton.[13] Then, on 7 August, Congress voted the following resolution:

> Resolved: That an equestrian statue of General Washington, be erected at the place where the residence of Congress shall be established. . . . [Details of style and design follow.] Resolved, That a statue conformable to the above plan be exe-

[10] Sellers, pp. 35–36.

[11] Kimball, "Paintings and Engravings," p. 380 and note.

[12] *The Writings of George Washington from the Original Manuscript Sources, 1745–1799*, ed. J. C. Fitzpatrick, 26 (Washington, D.C., 1938), p. 186; cited by D. S. Freeman, *George Washington. A Biography*, 5: *Victory with the Help of France* (New York, 1952), p. 430. For the incidents and chronology of the period, Freeman's work has not been bettered by J. T. Flexner, *George Washington in the American Revolution (1775–1783)* (Boston, 1967).

[13] Freeman, pp. 439, 447, 450, 451; for the period from August through December 1783 see W. S. Baker, *Itinerary of General Washington from June 15, 1775 to December 23, 1783* (Philadelphia, 1892), pp. 304–19.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

> cuted by the best artist in Europe, under the superintendance of the Minister of the United States at the Court of Versailles; and that money to defray the expence of the same, be furnished by the treasury of the United States. Resolved, That the Secretary of Congress transmit to the Minister of the United States at the Court of Versailles, the best resemblance of General Washington that can be procured, for the purpose of having the above statue erected; together with the fittest description of the events, which are to be the subject of the basso relievo.[14]

From the end of August until 9 November, General and Mrs. Washington lived at Rocky Hill, four miles from Princeton, with very little to occupy their time.[15] At this same time William Dunlap, aged 17, was staying at the house of John Van Horne, within walking distance of Washington's headquarters. Van Horne asked Dunlap to paint portraits of himself and his wife, and was so pleased with the results that he asked Washington to sit for Dunlap. It was also at this time that:

> Mr. Joseph Wright . . . arrived at headquarters from Paris, bearing letters from Dr. Franklin, which entitled him to sittings from the general and Mrs. Washington[16] . . . . This was in October, 1783[17] . . . . Congress then sitting at Princeton, Mr. Wright was employed to take a mould in plaster of Paris, from which a cast might be made of the general's features, to be sent to some European sculptor, as a guide for a marble bust or statue. The general submitted to the irksome task of laying on his back, with his face covered with wet plaster. What a situation for a hero! When the mask or mould was hardened, the artist took it off, but in his anxiety and trepidation, probably hurrying to release the general from thralldom, he let

[14] *Journals of the Continental Congress, 1774–1789*, ed. J. C. Fitzpatrick, 24: *1783, January 1 – August 29* (Washington, D.C., 1922), pp. 494–95.

[15] Freeman, p. 451; Baker, pp. 304–6.

[16] Dunlap, p. 253.

[17] Dunlap, p. 254.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

> it fall and it was dashed to pieces on the floor. Washington would not carry his desire to comply with the wishes of the congress so far as to undergo another prostration, and the affair of a sculptured resemblance was deferred until Franklin brought out Houdon.[18]

In the last sentence Dunlap anticipates, and not with total accuracy, the events of 1785 which will be discussed later.

From Rocky Hill, Wright moved to Philadelphia and set up shop.[19] On 3 November the army was dismissed, the next day Congress adjourned, and on 9 November Washington set out for New York City. After the final evacuation of the British, Washington took leave of his officers, and on 6 December he turned for home, passing through Philadelphia two days later and arriving on 19 December at Annapolis where Congress was sitting. There he resigned his commission. On Christmas eve he reached Mount Vernon.

There he found waiting for him a letter from an unknown admirer, the aged Count Solms, commander of the Saxon fortress of Königstein. Writing on 9 July, Solms asked for a portrait of Washington.[20] On 3 January 1784, Washington wrote very cordially to Solms saying that the portrait would be sent as soon as it was ready. On 10 January he sent Wright instructions to turn the portrait over to Robert Morris for shipment via London;[21] and on the same day he wrote a private letter to Morris:

[18] Dunlap, p. 313. Washington himself kept no diaries between 6 November 1781 and 31 August 1784: *The Diaries of George Washington, 1748–1799*, ed. J. C. Fitzpatrick, 2: *1771–1789* (Boston, 1925).

[19] Dunlap's statement "In 1784, and probably in the winter of 1783, Mr. Wright was in Philadelphia" (p. 313), is confirmed by Washington's letter to Morris, quoted in the next paragraph (and see n. 22).

[20] Original French text with translation printed by Johnston, pp. 34–35, without source. For Friedrich Christoph, Graf zu Solms (b. 11 May 1712, d. 11 May 1792), see *Allgemeine Deutsche Biographie . . . herausgegeben durch die historische Commision bei der Königliche Akademie der Wissenschaften*, 34 (Leipzig, 1892), p. 576. The episode is covered by Kimball, "Paintings and Engravings," p. 379.

[21] *Writings*, ed. Fitzpatrick, 27 (1938), pp. 290–91, 296–97; cited from earlier editions by earlier writers.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

> Mr. Wright is desired to hand it to you for this purpose; and as he is said to be a little lazy, you would oblige me by stimulating him to the completion. By promise, it was to have been done in 5 or 6 weeks from the time I left Philadelphia, nearly four of which have expired.[22]

Here, incidentally, is evidence that Washington had met Wright in Philadelphia and ordered for himself a portrait from the studies which Wright had made for the Congress at Rocky Hill.

On 15 May Washington made the following note: "By cash, paid Mr. Wright for draw^{g} my picture for the C^{t} de Solms. 40 D^{rs} and half a John £18.0.0."[23]

On 19 January 1785, Washington's diary records the overnight visit at Mount Vernon of a young man named Elkanah Watson.[24] In his memoires, composed in 1821, Watson provides an anecdote of Wright in Washington's own words:

> "Wright came to Mount Vernon," the General remarked, "with the singular request, that I should permit him to take a model of my face, in plaster of Paris, to which I consented with some reluctance. He oiled my features over; and, placing me flat upon my back, upon a cot, proceeded to daub my face with the plaster. Whilst in this ludicrous attitude, Mrs. Washington entered the room; and, seeing my face thus overspread with the plaster, involuntarily exclaimed. Her cry excited in me a disposition to smile, which gave my mouth a slight twist, or compression of the lips, that is now observable in the busts which Wright afterward made."[25]

[22] *Writings*, ed. Fitzpatrick, 27 (1938), p. 297.

[23] Johnston, p. 34, without source.

[24] *The Diaries*, ed. Fitzpatrick, 2, pp. 336–37. For this visit see Sellers, pp. 190–93.

[25] E. Watson, *Men and Times of the Revolution. Or, Memoires of Elkanah Watson*, ed. W. C. Watson, 2nd ed. (New York, 1857); quoted by Morgan and Fielding, p. 82; and less fully from the 1st ed. (1856) by Kimball, "Paintings and Engravings," p. 36.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

On 30 January Washington wrote to Joseph Wright:

> Sir: It has so happened that your Card of Septr. 1st, with the Bust which accompanied it, did not get into my hands until sometime in the course of last month .... For [it] you will please receive the united acknowledgments and thanks of Mrs. Washington and myself. The large one she prays may give you no uneasiness or hurry; your convenience in the execution will be most agreeable to her wishes .... our best wishes attend you; and I am, etc.[26]

Here, I argue, is evidence that Washington's anecdote to Watson about the quirk in the mask was triggered by the presence under their eyes of the small bust recently received from Wright. Watson's recollection is erroneous in locating the incident of the life mask at Mount Vernon instead of at Rocky Hill, but the main point—that a mask was taken and included a facial quirk—is not substantially affected.

On 6 April 1785, the journal of the Congress records receipt of the large bust from Wright, and authorizes payment to him of $233.33.[27]

A year and one day later a New York newspaper carried an announcement of Wright's arrival "to follow his profession of a Limner here."[28] With Wright's move to New York, the first phase of his American career closes. From the period at Rocky Hill survive four oil portraits. Lost works from this period include the portrait sent to Saxony, the portrait of Mrs. Washington, the small sculptured bust sent to Mount Vernon, the large bust for Mount Vernon which we infer from Mrs. Washington's message, the bust delivered to Congress, and the matrix of the life mask.[29]

[26] *Writings*, ed. Fitzpatrick, 28 (1938), p. 49.

[27] *Journals*, ed. Fitzpatrick, 28 (1933), p. 238. The odd amount represents the sum of 50 guineas, converted at the rate of $0.222... per shilling (information from Richard G. Doty).

[28] *New York Daily Advertiser*, 7 April 1786.

[29] Although the bust type of 1783/84 could not be identified with any confidence by Kimball, "Sculpture," pp. 35–37, at least one version might still be discovered: see H. Comstock, "American Historical Portraits. The Burlingham Collection," *Connoisseur*, 94 (March 1934), pp. 31–37, esp. p. 37, for a small alabaster bust of Washington with a provenance from Wright himself, sold from the Burlingham collection in New York, 9–11 November 1933, "to a Philadelphia collector."

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The smallest of the four surviving oils (the "Hopkinson") is painted on wood and shows an unsmiling Washington with torso to left and face to right.[30] Because of its small size and because of its descent through the family of Francis Hopkinson, who was a neighbor and patron of Patience Wright in the 1760s and 70s and an agent for Wright in the 80s, there is some reason to believe that this is Wright's original, retained as a model for replicas.[31] The other portraits are at least three times as large and show Washington with torso as well as head to the right. In at least one of them, there is a marked quirk at the right hand corner of his mouth.[32] This gives a lively air to a face which was difficult to render.[33] The difference in pose and animation between the small and the large portraits is that for the latter Wright was able to use the life mask in which he had caught Washington smiling. With the aid of the life mask and of his sketches Wright could paint Washington from any angle without further sittings.

For some unknown reason, although Wright had delivered the sculptured bust to the Congress, the monument which they had voted in August 1783 was never realized, and the bust has disappeared.[34] In a separate commission voted on 22 June 1748, by the Commonwealth of Virginia, Houdon came from Paris to Mount Vernon in 1785 and took another mask which is the basis of the full-sized statue in Richmond and of a number of busts in marble and clay. This is the archetype of Washington as we know him in versions from Du Vivier's medal "Wash-

[30] Collection of the Historical Society of Pennsylvania, Philadelphia; ill. by Kimball, "Paintings and Engravings," p. 379, fig. 4.

[31] Hart's argument in this sense (based not on iconography but on size, and in ignorance of the "Menzies/Garvan" oil) was repudiated by Kimball, "Paintings and Engravings," p. 381.

[32] These are the "Menzies/Garvan," Yale University Art Gallery, New Haven, ill. by Kimball, "Paintings and Engravings," p. 376, fig. 1, the "Powel," Pennsylvania Academy of the Fine Arts, Philadelphia, ill. by Kimball "Paintings and Engravings," p. 377, fig. 2 and the "Jefferson," Massachusetts Historical Society, Boston, ill. by Kimball, "Paintings and Engravings," p. 378, fig. 3.

[33] Washington's self-description of sitting for artists "like Patience on a monument" is given in a light-hearted letter of 16 May 1785, to Hopkinson: *The Writings of George Washington*, ed. W. C. Ford, 10: *1782–1785* (Washington, D.C., 1891), p. 450. The explicit allusion to Patience Wright is explained by Sellers, p. 195.

[34] See n. 29.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ington Before Boston" down to John Flanagan's rendering on the current quarter dollar.[35]

The inauguration of Washington in 1789 brought a second wave of requests for portraits. Elizabeth Johnston reports a respectable tradition (which has still to be fully documented) that during the President's tour of New England he was asked to supply a profile likeness for a larger relief to be erected above the gate to the town common of Salem, Massachusetts. Through the agency of Benjamin Goodhue (1748-1814), United States senator from Massachusetts, a "clearly drawn crayon profile colored in India ink" of Washington in civil dress was sent to Salem.[36] Still according to Johnston, Goodhue's great-niece, Mrs. Nichols, rediscovered the drawing around 1861 together with the senator's endorsement that it was done in New York in 1790. In 1862 a copy was published. The artist is not named in the drawing or in the endorsement. The similarity of pose and rendering, as well as the coincidence of date with an etching that will be described below, led Johnston to attribute the "Goodhue" type to Wright's hand.

In 1931, when Morgan and Fielding published their work, the original "Goodhue" was untraced—very possibly still in the hands of the Goodhue/Nichols family—and they surmised that it was probably a "print."[37] In the same year Eisen reported that a photograph of it was kept in the Essex Institute in Salem together with Goodhue's endorsement.[38] The mention of a "print" raises the uncertainty that the original might have been unknown to Johnston; whence a difficulty in interpreting her statement of the medium of crayon (pastel) and India ink; and the further un-

[35] See G. A. Eisen and W. S. Conrow, "The Leutze-Stellwagen Mask of Washington in the Corcoran Gallery and Its Connections" and "Two Marble Busts of Washington after Houdon" in *History of the George Washington Bicentennial Celebration*, 3 (Washington, D.C., 1932), pp. 294–302 and 303–6, respectively; for the medal voted by Congress on 25 March 1775, see Loubat, vol. 1, no. 1, pp. 1–7, and vol. 2, pl. 1. The dependence of the obverse profile on Houdon's work is stated in a letter of 30 January 1786, from Jefferson in Paris to David Humphreys in London (printed pp. 6–7). Preliminary versions of obverse and reverse are in the ANS. The gold strike presented to Washington is in the Boston Public Library.

[36] Johnston, pp. 36–37, and pl. 2 (lower right).

[37] Morgan and Fielding, catalogue, p. 79, no. 12.

[38] Eisen, vol. 2, p. 444.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

certainty whether her illustration was from the original or from the "print." There is also difficulty in construing the term "print." Are we to understand an old photograph from the original, or a mechanical reproduction from the edition of 1862 or even from Johnston's own edition of 1882? Until the original "Goodhue" has been traced, its attribution to Wright must remain uncertain.

In the same year that Goodhue sent the drawing to Salem he also sent a copy of a signed etching of Washington by Wright. The likeness is a profile to the right in uniform rather than civil dress. At the time Washington's policy, as he described retrospectively in a letter to Henry Lee dated 2 July 1792, was to refuse sittings to artists except under exceptional circumstance. The principal motive was the call that public business made on his time; an additional motive was his resentment at providing a free living to artists "by being engraved, and that badly, and hawked about and advertised for sale."[39] Under these circumstances, to produce a likeness, Wright would have had to work from informal observation and/or the use of the sketches and mask dating back to 1783. In the latter supposition one can look in Wright's type of 1790 for the traits of the earlier type: short or informally dressed hair, a relatively youthful appearance, and the quirk at the right corner of the mouth: and all of these in fact appear in the etching.

Some evidence for the first supposition of direct but informal observation is provided by an anecdote published in 1857 by Gulian C. Verplanck who heard from John Pintard (who was three years younger than Wright) that Wright drew the profile for the etching in 1790 while Washington was sitting in St. Paul's Church in New York.[40] It is fully possible that the anecdote is authentic but also colored by later divulgation of Washington's letter to Lee.

Whatever the origins of Wright's etching, it is securely dated before June 1790, when Thomas Jefferson paid eight shillings for a copy on 10 June and sent one to his daughter Martha on 27 June.[41] In the

[39] *Writings*, ed. Fitzpatrick, 32 (1939), p. 84.

[40] Reprinted by Morgan and Fielding, pp. 77–78 from Verplanck in *The Crayon*, 4 (1857), pp. 246–47 (which I have not seen).

[41] Kimball, "Paintings and Engravings," p. 382, cites Jefferson's payment (without source). The letter to Martha Randolph is printed in *The Papers of Thomas Jefferson*, ed. J. P. Boyd, 16 (Princeton, 1961), pp. 577-78.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

same way at least one copy was sent by Senator Goodhue to William Bentley in Salem,[42] and a copy was published in the *Massachusetts Magazine* of March 1791. From it derive subsidiary copies which have occasionally been mistaken for the work of Wright or of other artists working at first hand.[43]

It is fully possible that the "Goodhue" is such a copy. Another example, now accepted as a copy, is the "Fullerton" version which was ambitiously published by Charles Fox of Boston in 1851. "To rescue from oblivion a Portrait which, in the opinion of competent judges, is a remarkable likeness of the Father of his Country, and to derive some pecuniary benefit from the sale of it, are the principal objects of the author in presenting it to the public."[44] Fox ascribed it to the consumptive Nathaniel Fullerton who observed Washington in Boston in 1776 and later died at an early age. Despite the embarrassing evidence which Fox included from Robert Knox, who dated the type as one to which his father (General Henry Knox) had subscribed during Washington's visit of 1789; and despite Fox's explicit ascription to Fullerton of Wright's etching of 1790; and despite the obvious resemblance of the two, Johnston still followed Fox in the attribution to Fullerton and the ascription to 1776.[45] There is still great confusion in the literature in distinguishing conceptually and in description between Wright's original drawing of 1790—which might be the untraced "Goodhue"—his etching, and the imitations from it. For numismatists the important point is that an unquestionably genuine icon of Washington was made by Joseph Wright in 1790.

[42] Morgan and Fielding, p. 79, quoting *The Diary of William Bentley*, 1 (Salem, 1914), p. 219, date of 15 December 1790.

[43] Summarized by Kimball, "Paintings and Engravings," p. 382, from C. H. Hart, *Catalogue of the Engraved Portraits of Washington* (New York, 1904).

[44] C. Fox, *A Portrait of George Washington from an Original Drawing as He Appeared While Reviewing the Continental Army on Boston Common in 1776; A History of the Portrait and Documentary Evidence of the Correctness of the Likeness* (Boston, 1851), preface, unnumbered p. 7.

[45] Fox, p. 37 and note; Johnston, p. 21. F. F. Sherman, "The Portraits of Washington from Life," *Art in America*, 18 (1930), pp. 150–62 accepts the "Fullerton" as a "probably correct likeness" of 1776 (p. 156).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Next in the series of profiles of the type of 1790 is a wax medallion which is both the most important and the most diversely-documented piece to be considered in the attribution of our trial strike. Following Kimball, we may call it the "Richardson/Smith" profile. From typescript copies of an exchange of letters of May 1879 between Benjamin R. Smith of Germantown, Pennsylvania, and Benson Lossing, we find that Smith discovered the wax medallion in a house which he owned in Newport, Rhode Island.[46] On the back of the frame was written "Gen'l Washington by Mr. Wright of Phila. for T. R." Thinking that this might answer to a die allegedly cut by Wright, about which Lossing had published an account,[47] Smith submitted a photograph to Lossing, who answered that the medallion was handmade rather than die struck, and that in any case Wright's die was much smaller. Johnston published a photograph of the wax in 1882, mistakenly showing the profile to the left, and Kimball later republished the illustration from Johnston.[48] Without alluding to the Smith/Lossing correspondence, but presumably from personal inspection and/or information from the Smith heirs, Kimball described the medallion as inscribed "*J. Wright, fecit*, . . . descended from Thomas Richardson of Newport, Rhode Island, to his grandson, Benjamin G. [*sic*] Smith."[49] From personal correspondence with Esther Fisher Benson, a granddaughter of Benjamin R. Smith, I learn that her family understood that the medallion descended to her grandfather from Thomas Richardson, along with the house which had come to Richardson by his marriage to Sarah Robinson of Newport. For about five years before this country's entry into the Second World War, the medallion was in the keeping—but not the ownership—of Mrs. Benson, and was the subject of a lecture by John Howard Benson for the Rhode Island School of Design. Then the medallion was re-

[46] Available at the New-York Historical Society, catalogue no. NB 237.W95, "Envelope containing miscellaneous items relating to Patience Wright."

[47] In this typescript of the letter from Smith, the direct quotation from Lossing's book is badly garbled; a correct version is printed below from p. 173 of the edition of 1871 (see note 66).

[48] Johnston, pl. 26 (right), opposite p. 168; signature not shown. Kimball, "Sculpture," p 37, fig. 5.

[49] Kimball, "Sculpture," p. 37. Smith's middle initial is confirmed as "R" on the authority of Mrs. Benson (see below).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

moved by the owner and sold through Parke-Bernet of New York. Altogether, then, although the medallion is now untraced, we have this evidence: from Smith's glass negative kindly supplied by Mrs. Benson (PLATE 27, 4), we know that it faced to the right rather than to the left as Johnston and later Kimball printed; from Kimball there is evidence for the signature "J. Wright, fecit;" and from Smith for the endorsed attribution to "Mr. Wright of Phila."

The importance of the "Richardson/Smith" medallion is twofold: first for the attribution, which I take to be established beyond reasonable doubt by two lines of literary evidence, and corroborated by the tell-tale quirk at the right corner of the mouth; and second for the identity of the head with that in our trial strike. From this identity of icon I attribute the medal to Joseph Wright.

A plaster medallion virtually identical with the "Richardson/Smith" wax descended in the Custis family—through a grandchild of Martha Washington by her first marriage; a child of George Washington by adoption—and is now at Mount Vernon, attributed by Kimball to Wright on the basis of the wax. Another plaster of the same type has since appeared and has been similarly attributed.[50] Two additional examples of the same type were catalogued as lots 51 (silver) and 52 (wax) in a sale of Washington family property in 1917, but have since disappeared from the literature.[51] Another of the same type, but with slightly different proportions, and signed "J. Wright" was presented to the Mount Vernon Ladies' Association in 1897 by Mrs. W. S. Story.[52]

Another version of Wright's type of 1790 is the "McKean" oil portrait of Washington which shows the humorous quirk at the right corner of the mouth (PLATE 27, 5).[53]

[50] Kimball, "Sculpture," p. 36, fig. 4, after Johnston, pl. 26 (left) opposite p. 168; the second plaster is cited in J. T. Flexner and L. B. Samter, *The Face of Liberty* (New York, 1975), p. 136 and pl. 35; bibliography, p. 304.

[51] The Anderson Galleries, New York, *Historical Relics of George Washington Inherited and Collected by Mr. William Lanier Washington... To Be Sold on Thursday Evening, April 19, 1917*, pp. 40–41.

[52] Elsen, vol. 3, p. 753, pl. 218, p. 911.

[53] Courtesy of the Cleveland Museum of Art, Hinman B. Hurlbut Collection, 831.17.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

If we acknowledge the identity of the images, there is still a question whether the medal is to be considered absolutely as from Wright's hand, or only as based upon his model. Here a direct comparison with Wright's medal of Henry Lee is decisive: there is substantially the same pose, the same costume, the same relief, the same treatment of the hair, the same soft modeling of the face. On these grounds I argue that the same hand engraved the two dies.

There are still some odd features in the Washington medal and in the signed and unsigned medallions. In the medallions the relation of head to neck is very rigid and not at all lifelike. In the medal the relationship is the same but the result is made more agreeable by tilting the head back about 15 degrees. Here again we find Wright manipulating the mask of the captive Washington.

Then, in the medal more than in the medallions, the bony structure of the nose and cheek stands out more than in any of the likenesses from other hands. What we are looking at, I believe, is the image of Washington flat on his back, with his neck rigid and the flesh of his face falling inward.

The same problem of working up a lifelike version from the unnatural relation of head and neck that results from a mask taken from a supine subject also faced Houdon in his statue of Washington for the statehouse in Richmond, and Daniel Chester French in his statue of Lincoln for the memorial in Washington. Houdon worked from the mask he took at Mount Vernon in October 1785; French, from two copies that he owned of a mask taken by Leonard Volk in 1860.[54] Houdon in his statue, like Wright in his medal, tilts the head back; Wright in his wax and plaster medallions tilts the head moderately forward; while French tilts the head far forward between hunched shoulders. The greatest realism in working from the unnatural attitude imposed by a face mask is attained in the extreme pose which French adopted.

The terminus a quo for the whole series of profiles—drawn, etched, painted in oil, modelled in wax, plaster or metal, and engraved in a medallic die—is the first half of 1790, and the terminus ante quem must

[54] Included in the exhibit "Daniel Chester French: An American Sculptor;" catalogue of same title, ed. M. Richman (New York, 1976), not seen.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

be Wright's death from yellow fever in Philadelphia between 11 and 14 September 1793.

From a microfilm of *Miscellaneous Treasury Accounts* in the National Archives, Taxay has printed the following record dated [Wednesday] 11 September:

> Joseph Wright being very ill and not expecting to recover requested the subscriber [Moid Wetherill] to make a memorandum as follows:
>
> That the said Joseph Wright has presented an account against the United States for cutting a medal amount fifty Guineas.
>
> Two Essays of a Quarter Dollar, cut by direction of David Rittenhouse, Esqr. and presented to him (broke in hardening) value about 40 Guineas.[55]

A notice of Wright's death was printed in the *National Gazette* on [Saturday] 14 September.[56] The actual day of death was probably Thursday 12 September or Friday 13 September.

According to Taxay, Wright probably began work at the mint in August 1793, and the liberty-cap cents were issued on 18 September.[57] Presumably the dies for the cent were covered by Wright's salary as mint engraver, and not therefore included in the deathbed memorandum. In this supposition, the dies for the trial quarter and for the (unnamed) medal were cut before Wright's appointment. The medal is identified by a warrant of payment to Wright's executor, dated 13 January 1795, in the amount of $233.33 (equivalent to 50 guineas)[58] for "modelling the likeness and cutting two dies for a medal of Henry Lee Esq."[59] Beyond a doubt, the Lee medal was done before August 1793, but how much earlier cannot be exactly determined.

[55] Taxay, *U. S. Mint*, p. 75 and reference there.

[56] The date hitherto unremarked in the handbooks, though reference cited by G. C. Groce and D. H. Wallace, *The New-York Historical Society's Dictionary of Artists in America, 1564-1860* (New Haven, 1957), p. 705.

[57] Taxay, *U. S. Mint*, p. 105.

[58] See n. 27.

[59] Quoted in *The Papers of Thomas Jefferson*, 17 (1965), p. xxxiii.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

A little help is provided from the mint history, and from Thomas Jefferson's "Notes on the History of the Medals":

> After I returned to America Genl. Lee applied to me for a medal voted him by Congress, which Mr. Morris's list by mistake omitted, and [Lee] producing to me the resolution of Congress for the purpose I put it in hand with Wright to be executed in Philadelphia. Wright, as well as I recollect, would not agree to warrant against the quality of the steel. His dies broke after they were executed, so that this matter was not concluded when I left Phila.[60]

Without giving their reasons, Jefferson's editors date the "Notes" to around 8 July 1792: but since the land for the Philadelphia mint was not purchased until 18 July 1792,[61] and the smelting and coining equipment installed later; and since it is very difficult to imagine something of the size of the Lee medal being worked up and struck with private gear, Jefferson's "Notes" should be dated later than 8 July 1792. All in all, it seems best to consider the period of not more than about nine months prior to August 1793 as the time in which Wright produced the pattern quarter and the Lee medal.

Although one can distinguish between the two projects which Wright undertook before his appointment and the single project which he finished after his appointment, one cannot assign the Washington die unambiguously to one period or the other. Since there is no material evidence that the medal advanced beyond the preliminary state, the work cannot be assigned to either the private or the public work of Joseph Wright. Still, it is barely possible that the dished impression on the reverse (described at the beginning of this article) was caused by the use of the Lee medal under the blank for the Washington trial. Certainly the reverse impression is congruent in size with the Lee profile, and too small for Washington's; but too obscured to permit positive identification. From this suggestion—and it is only a suggestion—we might have the relative chronology of the two medals.

[60] *The Papers of Thomas Jefferson*, 16 (1961), p. 77 and notes. An erroneous note there on the broken obverse die is corrected in vol. 17 (previous note).

[61] Taxay, *U. S. Mint*, p. 97.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Leaving aside the exact time and circumstances under which Wright prepared the Washington die, one may legitimately inquire about his purpose. Realizing that Wright could have been working for a variety of reasons—to try his steel, to try his hand, to work up something for private sale, to work up an official commisison—one must remember from Jefferson's "Notes" that Wright came to the Lee medal in the first place because Robert Morris had omitted it from the list of medals, voted by the Congress, which he forwarded to Jefferson for execution in Paris. Although it has been suggested that a resolution of Congress on 8 October 1777 authorized a second medal for Washington for the inconclusive battle of Germantown, the resolution is best understood as supplementary to the original vote of a medal after the British evacuation of Boston.[62] In sum, then, the medal of Washington should not be understood as a commission of the Congress and cannot be documented as official work. Further suppositions on the origin of the medal would be speculative.

If the identification of the subject and the artist of this recently discovered trial strike can now be considered secure, there is now occasion for a small excursus on the problem of the plaster life-mask which Wright took at Rocky Hill in October 1784.

There can be no doubt that the mask was made, since it is mentioned independently by two people close to the sources. Dunlap was in the neighborhood at the time, and in frequent contact with both Washington and Wright. Watson had the story from Washington himself about 14 months after the event, and gives Washington's light-spirited explanation of the humorous quirk that was apparent in the mold and in the resulting sculpture that was in the same house at the time the

[62] An editorial note in *The History of the George Washington Bicentennial*, 3 (Washington, D.C., 1932), p. 457, no. 225, glossing the resolution of 7 August 1783 (see text and n. 14 above) states: "On Oct. 8, 1777, after the battle of Germantown Congress voted a second medal to Washington. Nothing was done about it." Direct reference to the resolution of 8 October 1777 (*Journals of Congress*, ed. W. C. Ford, 9: *1777, October 3 – 31 December* [Washington, D.C., 1907], p. 785) shows that a second medal was not voted; rather, the original committee of 1775 (see n. 35) was expanded from three to five. W. S. Baker, *The Medallic Portraits of Washington* (Philadelphia, 1885), correctly calls the medal voted in 1775 "the only one of Washington ordered by Congress" (p. 27).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

anecdote was told. Accordingly, if we accept Dunlap's statement that the mold was broken, we can posit that some or all of it nonetheless survived, sufficient to show at least the mouth and possibly the whole face and neck. Collateral evidence for this supposition comes—despite his own intention—from Rembrandt Peale's lecture on "Washington and His Portraits," first prepared in 1854 (that is, after the publication of Dunlap, but before Watson):

> It may be proper to mention that A Philadelphia Artist, Mr. Wright, having made a Cast from Houdons Bust, as usual, divided it in the centre into two parts, to take it off—When these parts were put together, to take an impression, they were not well united, & his Cast, which I early examined, gave a false breadth to the nose & flatness to the face. After the death of *Wright*, his family preserved the Cast with great care, under the erroneous idea that it was made on the living face, which was never done but once, and that by *Houdon*. This imperfect Mask has unfortunately been often repeated . . . .[63]

Peale's principal assertion about the mask is contradicted by the better witness of Dunlap and Watson. An obvious motive for Peale's disparagement of Wright is the personal stake that the Peale family had in making and selling their own likenesses of Washington. Less well known today but clear enough in the last century is Peale's professional rancor against Dunlap.[64] Substantially the most valuable information from Peale is that Wright's mask was "often repeated." Clearly an example would be of the greatest interest now, but none has yet been identified. Now the search should begin, not for the type of finished bust which Wright supplied to Washington and to the Congress, but for the casts made from the broken lifemask.

On the premise that this trial strike is Wright's work, one can now search for early records of a medal of Washington by Wright. Any

[63] The lecture was first given on 1 April 1854, to the Historical Society of Pennsylvania (Johnston, p. 119). It is reprinted from an edition of 1858 by Eisen, vol. 1, pp. 297-323, this passage on p. 302.

[64] For Rembrandt Peale, see Johnston, pp. 118–27; esp. p. 26 (compare p. 15) for the anecdote of Washington being "pealed" (painted) by four of the family simultaneously; on Peale against Dunlap see Johnston, p. 121.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

attribution to Wright can be made with certainty only in terms of an authentic signature, an authentic icon, a documented but untraced icon, or of "style" in the narrow definition of physical traits of workmanship. In these terms the new medal has a signature that is compatible with the one in the etching; it shows the identical icon of the face in the signed etching and the signed wax medallion, with which beyond doubt are connected the unsigned "McKean" oil, and three unsigned profiles in metal or plaster. Further, it corresponds to the documented but lost icon in the mask and, finally, it has the traits of workmanship common to the fully-documented Lee medal and pattern quarter, with which is connected the liberty-cap cent of 1793.

In searching the record for a medal of Washington by Wright, there are several distinct difficulties, and all the pieces mentioned must be examined according to the criteria outlined above. If direct inspection of a piece is still possible, it will be necessary to exclude some attributions as unproved and some as erroneous; in the alternative case of pieces no longer available for examination, positive attribution or condemnation is clearly impossible. In all cases one must distinguish between judging whether a piece is in Wright's iconographic convention, and whether it is from his hand.

The earliest literary testimony on the subject was printed by the reverend Timothy Alden (1771–1839) in 1814:

232.

MEDAL OF WASHINGTON

> *Note.* JOSEPH WRIGHT, by profession a painter, belonging to Philadelphia, many years since exercised his ingenuity in making a die, from which he struck one copy of WASHINGTON's head, which is now in the possession of the honourable Ebenezer Hazard, esquire. It is a unique, and is peculiarly valuable, being considered the best medallick profile likeness of the illustrious Washington, which has ever been taken. The artist, in attempting to make a second impression, unfortunately broke his die.[65]

[65] T. Alden, *A Collection of American Epitaphs and Inscriptions with Occasional Notes*, 2nd ed., vol. 1 (New York, 1814), pp. 227–28.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Since Alden's next item but one (no. 234) is an extract of the private journal of Hazard (1744–1817) we may suppose that his information came directly from Hazard, a well known antiquary.

In a work on Mount Vernon published in 1871, Benson J. Lossing, relying entirely—and without acknowledgement—on Dunlap's *History*, recapitulated Wright's meeting with Washington at Rocky Hill in 1784, and continued:

> Young Wright appears to have been unfortunate in his efforts to acquire fame and fortune in connection with the likeness of Washington. He afterward cut a die for a medallion profile of the chief, which was declared by all to be an exceedingly faithful picture. After striking a few impressions the die was broken, and the artist's labor was lost. An engraving on copper, of larger size, was afterward made from one of these impressions. A broadside edition of Washington's Farewell Address, printed in 1796, in possession of the writer, is embellished with an impression from that engraving.[66]

The first sentence is a bridge from Dunlap to Alden, the next two paraphrase Alden and seem to exclude Lossing's personal knowledge of the piece ("lost"). The next sentence ("An engraving . . .") could be based on direct observation, or taken without acknowledgement from Verplanck's account of the engraving, published in 1857.[67] For all his reticence about his sources, Lossing does not assert the identity of icon in die, engraving, and book illustration; still less does he assert the identity of die for use in striking metal and imprinting paper.

Exactly this confusion, however, was made by Gustavus A. Eisen in paraphrasing Lossing: "Wright made a die with a profile of Washington to be used on circulars and other prints. The die was used in an edition of Washington's *Farewell Address*, published in 1796, but broke before Wright could reproduce it on a copper plate as was his

[66] B. J. Lossing, *The Home of Washington and its Associations, Historical, Biographical, and Pictorial* (New York, 1871), p. 173. An example of the broadside is in the collection of the Historical Society of Pennsylvania, the illustration inscribed in the plate: "Drawn by J. Wright, engraved by W. Evans."

[67] See n. 40.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

intention."[68] Lossing's unacknowledged recapitulation of Alden's notice of the medallic die prompted the exchange of letters in 1879 in which Benjamin R. Smith of Germantown disclosed the "Richardson/Smith" wax medallion discussed earlier.

Meanwhile, in 1872, the *American Journal of Numismatics* reprinted Alden's notice of 1814 with the editorial addition: "Who knows anything of this unique specimen?"[69] No answer appeared in later issues of the *Journal*, and from that time to now Alden's citation has not been acknowledged in the literature. Parts of it, however, were repeated verbatim by Loubat in 1878.[70]

Having traced Alden's evidence from original publication to reception as "common knowledge" we may now pause in a search for Wright's die to exclude from consideration the pieces that cannot legitimately be credited to Joseph Wright.

First to go must be any idea that Wright was responsible for any of the "Washington cents," or other pattern coins with the president's likeness on the obverse and, usually, on the reverse the heraldic eagle from the great seal of the United States.[71] Wright's authentic pattern quarter of 1792 with a female head on the obverse, and an eagle-on-globe on the reverse, has been fully documented by Taxay. It was imperfectly mentioned by Dunlap in 1834:

> I have before me a design for a *cent* made by Mr. Wright, and dated 1792. It represents an eagle standing on the half of a globe, and holding in his beak a shield with the thirteen stripes. The reverse had been drawn on the same piece of paper, and afterwards cut out.[72]

[68] Eisen, vol. 2, p. 448.

[69] *American Journal of Numismatics*, 5 (1872), p. 77, with some variants in spelling and typography from Alden's edition.

[70] Loubat, 1, p. 30: "considered . . . the best medalle profile likeness of . . . Washington."

[71] Baker, *Medallic Portraits*, nos. 1–46; see also E. P. Newman, "George Washington's Unique 1792 Pattern in Gold," *Studies on Money in Early America*, ed. E. P. Newman and R. Doty (New York, 1976), pp. 199–208.

[72] Dunlap, p. 314 (note).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Dunlap was mistaken in the denomination but exact in his description of the one side known to him. Overlooking Dunlap's description of the eagle-on-globe, and fastening on the rumor of a Washington die that Alden first mentioned, later writers have been generous but erroneous in ascribing the Washington patterns to Wright. These arguments are corruptions and conflations in a literary tradition and are not based on numismatic evidence.

Next to be excluded from the search for the products of the die mentioned by Alden are the Washington medals that can be positively ascribed to Charles C. Wright, no relation to our subject. First is the medal signed "W. Ft." and "Wright and Bale" issued around 1829–34. While Baker correctly published this in 1883 as "no doubt the work of Charles C. Wright alone," and considered it a rendering after Houdon, Belden later confused things by overlooking C. C. Wright and saying "the bust is after the portrait profile by Joseph Wright."[73] The confusion of names in no way impugns Baker's attribution. Also to be excluded are all the other Washington medals by C. C. Wright, of which as far as I know only the "Centennial" Medal of 1832 (Baker, no. 133, p. 70; signed "C. C. W.") has been preposterously fathered on Joseph Wright.[74]

Of the attributions that have been responsibly made to Joseph Wright, the most venerable concerns the "Manly" medal of 1790 (PLATE 28, 6; Baker, no. 61) which has been traced to Wright's etching by Johnston as early as 1882 and by Storer in 1919. While Johnston described it as "after" Wright, Storer considered it as fully Wright's icon.[75] In neither case can a reference to Wright's sculptured bust be

[73] Baker, *Medallic Portraits*, p. 41, and catalogue nos. 74–75, pp. 47–48; B. L. Belden, *Indian Peace Medals Issued in the United States* (New York, 1927), p. 43; pl. 21, fig. L.

[74] G. G. Evans, *Illustrated History of the U. S. Mint at Philadelphia* (Philadelphia, 1891), p. 126 quotes Alden from Loubat on Joseph Wright and continues in a note: "The phototype of Wright's profile likeness in the bound edition of this book is from this medal, known as the Houdon medal."

[75] Johnston, p. 245; M. Storer, "The Manly-Washington Medal," *Proceedings of the Massachusetts Historical Society*, 52 (1919), pp. 5–7; p. 5 reproduces a handbill published in Boston, 23 September 1790, advertising the arrival of the "artists, who took the most correct likeness of the President of the United States, and executed a medal of him;" which Storer glosses (p. 6): "The 'artists in attendance, were pre-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

accepted until the type has been identified with certainty; and Storer's reference to the etching is not borne out by direct inspection. What the "Manly" medal and the etching have in common is the pose, the uniform, and the attenuation of the nose. They differ markedly in the style of hair and in the entire configuration of the face. If the "Manly" icon is "after" Wright's, it is very far removed from it. Implicit in any such argument is the premise that of all the people who saw Washington in New York or Philadelphia in 1790, Joseph Wright alone could make a profile likeness. This has only to be mentioned to be dismissed as unwarrantable.

In publishing his corpus of Washington medals in 1885, Baker attributed none to Wright's hand, but listed the following as based on Wright's etching of 1790: nos. 92, 164–69, 233, 257, 365, and 457. The total of 11 types can be reduced to 3 groups of dies. The earliest (nos. 164–69) are for the series of mortuary medals designed by Dudley A. Tyng of Newburyport, Massachusetts, in 1800 (PLATE 28, 7).[76] Direct inspection shows that this type, like the "Manly" type of a decade earlier, has only the general elements of pose and costume in common with Wright's etching. Since by 1800 there were numerous and excellent medallic profiles of Washington available from English and American sources, there is even less reason than in 1790 to trace the icon to Wright.[77]

Between 1862 and 1867, John A. Bolen of Springfield, Massachusetts, cut five dies of Washington (Baker, nos. 258; 365; 257; 92=233=365; 56).[78] The likeness is very close to the type of Wright's etching and could have been taken from it directly or through intermediaries such as the "Fullerton" type published in 1851 by Charles Fox of Boston.[79] Stylistically the

---

sumably Samuel Brooks of Philadelphia, who executed the medal, his name being on the foot of the bust, and Joseph Wright of Bordentown, New Jersey, who modeled the bust."

[76] Baker, *Medallic Portraits*, p. 78, and Storer, p. 70.

[77] For example, the Washington patterns produced in England (Baker, *Medallic Portraits*, nos. 1–46; see n. 71 above); and the "Halliday" and derived "Samson" medals of 1797 (Baker, *Medallic Portraits*, nos. 70, 71).

[78] [J. A. Bolen] *An Accurate and Descriptive Catalog of the Medals Cards and Fac-Similes Struck from Dies Made by J. A. Bolen* (Providence, 1905), nos. 6, 9, 11 (p. 9), 13 = 16 (p. 11), and 25 (p. 15).

[79] Fox, frontispiece.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

tight roll of hair above the ear owes more to the "Fullerton" type than to Wright's original (PLATE 28, 8).

Charles Morgan is responsible for the last series of dies, beginning in 1883, the year following Johnston's publication. The first example (PLATE 28, 9; Baker, no. 457) was issued to commemorate the centennial of the British evacuation of New York. It is closely based on Wright's etching, even in the loose arrangement of the hair. Morgan used the same type—probably the same hub—in a new die of 1889.[80] The first die was reused in 1897 with a new reverse to commemorate an equestrian monument of Washington in Philadelphia. As far as I know, Morgan was the first and last to use the exact type originated by Joseph Wright.

A thorough review of the literature and of the corpus of Washington medals warrants the conclusion that Wright's die was directly recorded for the first and last time by Timothy Alden in 1814 and that as far as Wright provided a likeness for Bolen and Morgan it was in an etching or subsidiary type, and certainly not in the die or the medal now attributed to Wright's hand.

Pending the discovery of records supplementary to Alden, one can now conclude provisionally that the trial strike published here is the same that Alden knew from the collection of Ebenezer Hazard of Philadelphia in 1814.

[80] S. H. Douglas, "George Washington Medals of 1889," *Num*, vol. 62, nos. 5–7 (May-July 1949), pp. 274–83, 344–50, 395–409, this piece no. 43, p. 460; separately printed in 32 pp., this no. 43 on p. 23.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

THE 1830 COINAGE OF TEMPLETON REID

DEXTER C. SEYMOUR

After the ratification of the Constitution by the several States in 1789, the power of coining money was vested in the Congress, denied to the States, and the United States Mint established in 1792. Its output of gold coins, however, was increasingly eroded by a growing disparity between the actual and official ratio of gold to silver with the resulting economic forces causing the removal of the great majority of the gold from general circulation. By the 1820s, when gold was discovered in large quantity in North Carolina and Georgia, it has been said that gold coins were practically unknown in circulation.[1] A flood of local banknotes which were often of dubious value led to the trading of notes on individuals as a means to meet commercial obligations and, in the newly discovered gold regions, the unwieldly "quill of dust" put in its appearance as a medium of exchange. It is likely that this situation induced Templeton Reid to conceive of striking gold coins identified with his name and the assigned value in 1830 as a means to simultaneously relieve the coin shortage and to swell his personal coffers.[2]

Although Reid's operation was well received at first, he soon found himself losing the confidence of local bankers and the public due in part to inadequate or non-existent assays with consequent short value of his coins and in part to excessively zealous interpretation of the Constitution's provision for the right of coining money.[3] After only some 12 weeks of production Reid closed his "mint." His coins are today considered among the rarest of the so-called Pioneer Gold issues[4]

[1] D. Taxay, *The Comprehensive Catalogue and Encyclopedia of United States Coins* (New York, 1971), p. 346.

[2] D. C. Seymour, "Templeton Reid, First of the Pioneer Coiners," *ANSMN* 19 (1974), pp. 225–66.

[3] Seymour, pp. 233–49.

[4] Stack's, Gibson Collection (11 November 1974), p. 27; Kreisberg, Beck Collection 2 (12 February 1976), p. 41.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

primarily due to the fact that most of them were melted at the U. S. Mint not long after they were put into circulation[5] and it is of interest to determine how many were coined. From a consideration of the recorded data and with some reasonable assumptions, it is possible to make a good estimate of the total number and the number of each type struck by Reid. Inherent in this determination is the need for an accurate census of the extant specimens and such a study will be here presented.

Reid was a proud individual who was given to working independently and living alone and this, together with the fact that his "mint" was in operation only during the months of August, September and part of July and October of 1830, suggests that his total output of coins was relatively few.

ESTIMATION OF WEIGHT OF COINS MELTED

Among the Mint records available in the National Archives are three entries of deposits containing Reid's coins and from them it is possible to estimate the value of the gold in the melted coins.[6] From this figure in turn and a census of extant specimens a calculation of the approximate number struck can be made. The method of calculation described in detail below is essentially the same as that mentioned in my previous article[7] but the data from U. S. Mint records are here subjected to more refined treatment than formerly and the deposit from North Carolina is analyzed in greater depth. The result is a small but apparently significant change in the number of coins from that previously reported.[8]

The first of the deposits containing Reid's coins was made 13 January 1831 by the Bank of the United States as number 1854; it consisted of "bars and Reid's stamped pieces" with a gross weight of 6,555 dwt and an overall quality figure of .984. The weight of pure gold was thus 6,450 dwt and the value in United States coins was $6,253. Unfortunately there is no notation of the relative weights of bars and coins and we are forced to estimate the proportion of each constituent. This

[5] Seymour, pp. 242–43 and n. 76.
[6] Seymour, nn. 61, 68, 70, 76.
[7] Seymour, pp. 242–43 and n. 70.
[8] Seymour, n. 70.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

can be done from a knowledge of the mean values of the qualities of bars from Georgia. Table 1 summarizes the date of deposit, the deposit number, the gross and standard weights, the weight of pure gold and the resulting quality figures for each of the 23 deposits of gold bars from Georgia assayed at the U. S. Mint between 3 May 1830 and 30 August

TABLE 1

United States Mint Assays of Gold Bars from Georgia[a]

Date	*Deposit No.*	*Gross Wt. (dwt)*	*Std. Wt. (dwt)*	*Wt. Pure Au (dwt)*	*Quality*
5/3/30	1666	3381	3448	3161	.935
6/5/30	1692	1494	1428	1309	.876
1/19/31	1855	441	456	418	.948
2/14/31	1862	9015	9282	8508	.944
	1863	4787	5032	4612	.964
2/28/31	1868	5256	5314	4871	.927
5/2/31	1922	2298	2220	2035	.885
8/13/31	2011	839	911	835	.995
8/16/31	2016	664	721	661	.995
9/16/31	2043	1018	1003	920	.904
	2044	494	494	453	.917
10/4/31	2068	564	614	562	.997
4/10/32	2185	397	359	329	.828
5/7/32	2209	7684	8084	7410	.964
5/11/32	2216	896	889	815	.909
6/6/32	2231	926	1004	921	.995
6/14/32	2235	9363	9841	9021	.964
6/22/32	2242	10594	10564	9684	.914
7/5/32	2246	393	375	344	.875
8/11/32	2264	1300	1326	1215	.935
	2265	16095	14931	13687	.850
8/13/32	2266	17545	18015	16513	.941
8/20/32	2270	14644	14118	12942	.884

[a] "Gold Bullion Register, Jan 7, 1828 - Dec. 27, 1836," National Archives Record Group 104, Entry 113 (F. R. Holdcamper, Inventory of Records, Jan. 1968).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 2

United States Mint Assays of Reid's Coins

No.	*Denomination*	*Gross Wt. (gr)*	*Quality*
1	$10	248	.938
2	$10	248	.942
3	$10	246	.943
4	$10	247	.997
5	$ 5	122	.973
6	$ 2.50	59	.936
7	$ 2.50	60	.954
8	$ 2.50	60.5	.932

1832. Table 2 summarizes the pertinent similar data for all of Reid's coins assayed individually at the Mint.[9] From these data we calculate the mean value of the quality figure for the Georgia bars as .928 $\pm$ .007 and for Reid's coins as .952 $\pm$ .006. It is seen that each of these is below the quality figure of Deposit No. 1854 and it is necessary to make an assumption about the cause for this in order to estimate the composition. The most logical assumption seems to be that Reid, in responding to the attack on his integrity by "No Assayer,"[10] made an attempt to win back waning public confidence in his coins by subjecting them to a "fire ordeal" as a means of removing chemically reactive metallic contaminants. The attack was initiated publicly on 16 August 1830 and it is quite possible that Reid began efforts to purify the gold at this time. If this assumption is valid, a large proportion of the coins in the Bank's deposit would have had quality figures considerably higher than the .952 $\pm$ .006 noted above. Some support for this notion is provided by the assays of the five coins sent to the Mint in November 1830, numbers 3, 4, 5, 6, and 7 in Table 2. Note that the mean quality figure for these coins is .961 $\pm$ .009 and that three of them (numbers 4, 5, and 7) assayed substantially higher than numbers 3 and 6, the mean quality figure for which together with numbers 1, 2 and 8, is

[9] Seymour, nn. 62–63.
[10] Seymour, nn. 56–57.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 3

United States Mint Assays of Gold Dust from Georgia[a]

Date	*Deposit No.*	*Gross Wt. (dwt)*	*Standard Wt. (dwt)*	*Quality*
4/19/30	1657	10994	11243.54	.937
5/1/30	1663	4720	4888.1	.949
5/6/30	1667	6432	6596.4	.940
6/5/30	1689	1473	1544.1	.961
	1690	3222	3295.2	.937
	1691	2441.5	2510.8	.943
6/10/30	1702	2338.75	2411.8	.945
6/19/30	1710	2328	2361	.930
6/21/30	1712	994	1025	.945
6/24/30	1716	19737	20353.75	.945
6/26/30	1717	4320	4442.7	.943
6/28/30	1719	8363.5	8601	.943
7/6/30	1722	858	889.67	.951
7/7/30	1723	691	712.25	.950
7/9/30	1724	1010	1044.4	.948
7/10/30	1726	3968.25	4069.7	.940
7/12/30	1729	2600	2694	.950
7/16/30	1730	953	982.75	.945
7/17/30	1731	2522	2600.8	.945
7/28/30	1737	3206.5	3315.8	.948
8/3/30	1742	1234	1079.75	.802
8/4/30	1744	11507.75	11518.46	.918
	1745	1423	1463.4	.943
8/20/30	1760	3934.5	3576.8	.833
	1762	18560.5	18852.75	.931
8/24/30	1764	1716	1769.6	.945
	1767	524	464.4	.812

[a] "Gold Bullion Register, Jan. 7, 1828 - Dec. 27, 1836," National Archives Record Group 104, Entry 113 (F. R. Holdcamper, Inventory of Records, Jan. 1968).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	*Deposit No.*	*Gross Wt. (dwt)*	*Standard Wt. (dwt)*	*Quality*
10/1/30	1798	1243.5	1310.6	.966
	1799	3169.5	3277.5	.948
11/19/30	1828	9796.5	10054.5	.941
11/22/30	1830	4499	4729	.964
11/24/30	1832	9742	9984.4	.939
	1833	10197.5	10516.2	.945
2/7/31	1861	2238	2352.4	.964
7/13/31	1976	990	1035	.958
10/27/31	2084	2078	1906.75	.841
	2085	3537.5	3617.9	.938
10/31/31	2086	729.75	794	.997
11/7/31	2093	794	730.8	.844
11/11/31	2094	7663	8337.8	.997
9/3/32	2272	407.5	443.4	.997

nearly identical to that for the 41 samples of Georgia gold dust assayed at the Mint between 19 April 1830 and 3 September 1832 and summarized in Table 3 (.938 $\pm$ .002 and .932 $\pm$ .004, respectively). However, even the mean quality value for numbers 4, 5, and 7 (.975 $\pm$ .009), is somewhat below that for the Bank's deposit and we are forced to assume an arbitrary value for the quality of the coins therein. In my previous article a figure of .987 was chosen as reasonable and this has been used in the following calculation.[11]

Unfortunately, that volume of the "Register of Gold Bullion Deposited" containing the melting record of Deposit No. 1854 has not been preserved and we are deprived of the opportunity to make an independent comparative calculation of the composition. On the positive side, however, this deposit was much the largest of the three and the method of calculation of the composition, based as it is on the assay quality figures, yields a fairly confident result which is not particularly sensitive to errors in the assumptions made.

It is interesting to consider the other record of Deposit 1854 (Table 4).

[11] Seymour, p. 242.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 4

1st Mo 13th 1831[a]

Gold Bullion Deposited By The Bank United States

				oz	*dwt*	*gr*		*oz*	*dwt*	*gr*	*Quality*[b]
23	3½[c]	No.	1 gross	52	8	6	contains Stand[d]	56	17	13	.995
21	2¾		2	13	13	18	.....	13	9	20	.904
23	3¾		3	55	10	12	.....	60	8	7	.997
23	0¾		4	33	14	12	.....	35	10	21	.966
23	3¼		5	23	10	0	.....	25	8	17	.992
23	3¼		6	6	9	0	.....	6	19	15	.992
23	1		7	1	17	0	.....	1	19	2	.969
22	1		8	20	7	12	.....	20	12	3	.927
23	3¼		9	11	12	0	.....	12	11	2	.992
23	3½		10	84	17	12	.....	92	2	3	.995
23	3½		11	23	15	0	.....	25	15	11	.995
				327	15	0[d]		351	14	18[e]	

[a] Reproduced from "Record of Gold and Silver Bullion Deposited, 1801-1834," National Archives Record Group 104, Entry 115 (F. R. Holdcamper, Inventory of Records, Jan. 1968).

[b] Figures added for ease of reference.

[c] Fineness expressed in the carat system where pure gold is 24 carats fine and 4 carat grains equal 1 carat.

[d] Total gross weight is 6,555 dwt.

[e] Total standard weight (if of monetary quality, 22 carats fine) is 7,034.75 dwt.

The deposit was made up of 11 parcels but, unfortunately, the clerk who made the entry did not note which parcels were bars and which coins. However, if parcels two and eight with the lowest quality figures were bars, the composition of the deposit would be 681.25 dwt of bars and 5,873.75 dwt of coins. The mean quality figure of the coins on this basis would be .988 $\pm$ .003 and, in a sense, it bears out our choice of .987 as the average quality of Reid's coins. Although perforce this is mostly speculation, it is interesting that some agreement is so easily obtained between our calculated figures for the weight and quality of

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the coins in the deposit and those resulting from not unreasonable speculations regarding its individual parcels.

If we let x and y equal the weights of bars and coins, respectively, in dwt in the Bank's deposit and take quality figures for the bars and coins as .928 $\pm$ .007 and .987, we can write:

$$x + y = 6{,}555 \quad (1)$$

$$.928 \pm .007\,x + .987\,y = 6{,}555 \quad (2)$$

Solving the simultaneous equations for x and y gives:

$$x = 356 \text{ dwt} \quad (3)$$

$$y = 6{,}199 \text{ dwt} \quad (4)$$

Table 5 summarizes the range of values of x and y within the average deviation of the mean of the quality of the Georgia bars as noted in equation (2).

TABLE 5

Limits of Composition of Deposit No. 1854 from Mean Quality of Georgia Bars

	Quality of Bars	*Quality of Coins*	*Wt. of Bars (dwt)*	*Wt. of Coins (dwt)*
Min.	.921	.987	318	6,237
Mean	.928	.987	356	6,199
Max.	.935	.987	404	6,151

The second deposit was made 3 August 1831 by Robert H. Patton and was entered in the "Register of Gold Bullion Deposited" as "dust and Reid's coined pieces" from Georgia with gross weight of 134 dwt. The loss on melting was 4.5 dwt or 3.4 % of the total. Here too we are forced to estimate the proportions of dust and coins in the deposit since the official record contains no such notation. In this case, however, we can make the calculation from a knowledge of the mean composition of gold dust samples from Georgia. Table 6 summarizes the dates of deposit, the gross weights, the weights after melting, the weight losses and the percent weight losses of the 35 Georgia dust samples sent to the Mint between 20 April 1831 and 11 December 1832. The

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

mean percent weight loss is calculated to be 3.7 with an average deviation of ± 0.3 %. If the dust in Patton's deposit was within the range of mean purities for Georgia dust samples, we can estimate the proportions of coins and dust in the following manner.

TABLE 6

Melting Record for Georgia Gold Dust Deposited 1831-32[a]

	Gross Weight				*Weight After Melting*				*Weight Loss*			*%*
Date	*lb*	*oz*	*dwt*	*gr*	*lb*	*oz*	*dwt*	*gr*	*oz*	*dwt*	*gr*	*Weight Loss*
5/4/31	1	7	6	12	1	5	13	12	1	13	0	8.5
	1	5	10	12	1	4	18	0	0	12	12	3.6
	5	0	15	12	4	9	9	10	3	6	2	5.4
5/25/31	12	9	16	0	12	4	19	0	4	17	0	3.2
5/31/31	1	10	2	0	1	8	11	0	1	11	0	7.0
		2	4	0		2	4	0	0	0	0	0.0
		2	13	4		2	13	4	0	0	0	0.0
		10	1	8		10	1	8	0	0	0	0.0
	1	2	8	0	1	1	0	12	1	7	12	9.5
		10	8	0		9	7	0	1	1	0	10.1
	1	3	17	0	1	3	4	12	0	12	12	4.1
6/15/31	18	7	5	0	17	11	9	0	7	16	0	3.5
6/22/31		2	6	12		2	6	0	0	0	12	1.1
7/7/31		2	19	0		2	17	12	0	1	12	2.5
7/13/31	4	3	3	12	4	1	10	0	1	13	12	3.3
		2	4	12		2	2	18	0	1	18	3.9
8/16/31	2	0	8	0	1	11	8	18	0	19	6	3.9
		2	1	0		1	16	6	0	4	18	11.6
8/22/31		7	3	0		7	0	6	0	2	18	1.9
9/19/31	4	10	12	0	4	7	13	12	2	18	12	5.0
	2	8	5	0	2	7	5	0	1	0	0	3.1
		7	13	0		7	7	12	0	5	12	3.6

[a] "Register of Gold Bullion Deposited, Apr. 20, 1831 - Oct. 21, 1833," National Archives Record Group 104, Entry 118 (F. R. Holdcamper, Inventory of Records, Jan. 1968).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	Gross Weight lb	oz	dwt	gr	Weight After Melting lb	oz	dwt	gr	Weight Loss oz	dwt	gr	% Weight Loss
10/6/31	12	6	2	0	12	1	12	0	4	10	0	3.0
10/19/31		1	8	6		1	6	18	0	1	12	5.3
10/31/31	3	2	4	0	3	0	9	18	1	14	6	4.5
11/9/31	3	5	8	0	3	3	14	0	1	14	0	4.1
11/11/31	31	11	4	0	31	11	3	0	0	1	0	0.013
9/3/32	1	8	13	18	1	8	7	12	0	6	6	1.5
9/12/32	5	10	4	0	5	8	16	0	1	8	0	2.0
	4	7	12	0	4	6	7	6	1	4	18	2.2
	4	8	19	0	4	7	7	0	1	12	0	2.8
	18	11	15	0	18	6	1	12	5	13	12	2.5
12/11/32	2	6	13	0	2	6	3	0	0	10	0	1.6
	1	1	14	0	1	1	6	14	0	7	10	2.7
	3	9	13	0	3	8	7	0	1	6	0	2.8

Let x equal the weight of dust and y equal the weight of coins in dwt. Then:

$$x + y = 134 \qquad (5)$$

and $$0.037 \pm 0.003\,x = 4.5 \qquad (6)$$

from which $$x = 122 \pm 10 \qquad (7)$$

and, substituting in (5), $$y = 12 \pm \frac{22}{2} \qquad (8)$$

Unfortunately Patton's deposit was not sent on to the assayer for determination of the quality figure and we are deprived of this means to make an independent estimation of the proportion of coins in it.

The third and last deposit was sent by H. L. Kent from North Carolina and was so noted in the "Register of Gold Bullion Deposited" and in the "Gold Bullion Register" on 8 September 1832. In the former it was listed in two parts, one of which is described as "bars and coins" and the second as "bar and amalgam." In the Register the deposit is described as "Bars, Reid's coins and amalgam from N. Carolina" and this is indeed fortunate since it tells us that the coins were Reid's. The proportion of coins in the first part of the entry in the melting

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

record can be estimated from a knowledge of the mean purity of North Carolina gold bars if we make the assumption that the melting loss of the deposit was caused solely by impurities in the bars, that is, that the coins had no weight loss at all on melting. Since we know that Reid was a careful worker who took great personal pride in his abilities as a workman, this assumption seems quite reasonable. The "bars and coins" part of Kent's deposit had a gross weight of 579 dwt, a weight after melting of 578 3/4 dwt and, therefore, a weight loss of 1/4 dwt or 0.043 %.

TABLE 7

Melting Records for N. Carolina Gold Bars Deposited 1831-32[a]

Date	No. of Bars[b]	Gross Weight[c] lbs	oz	dwt	gr	Wt. After Melting lbs	oz	dwt	gr	Weight Loss oz	dwt	gr	% Weight Loss
5/14/31		2	9	17	6	2	9	17	0	0	0	6	0.037
5/19/31	14	11	11	18	12	11	11	17	12	0	1	0	0.035
5/21/31	1	1	10	12	0	1	10	12	0	0	0	0	0.000
	2		3	14	6		3	14	0	0	0	6	0.337
	1		4	12	0		4	12	0	0	0	0	0.000
	1		7	11	12		7	11	12	0	0	0	0.000
	1	4	0	2	0	4	0	1	12	0	0	12	0.052
	1	5	11	2	0	5	11	1	6	0	0	18	0.029
	2		6	9	18		6	9	12	0	0	6	0.193
	51	57	1	18	0	57	1	14	0	0	4	0	0.029
5/31/31	5	9	11	2	2	9	11	0	14	0	1	12	0.063
6/14/31	49	51	2	16	10	51	2	11	10	0	5	0	0.041
6/20/31		9	6	16	12	9	6	15	0	0	1	12	0.065
6/21/31			5	12	6		5	12	0	0	0	6	0.223

[a] "Register of Gold Bullion Deposited, Apr. 20, 1831 - Oct. 21, 1833," National Archives Record Group 104, Entry 118 (F. R. Holdcamper, Inventory of Records, Jan., 1968).

[b] Noted here only when unambiguously listed in the "Register."

[c] These figures are totals of each day's deposit by an individual depositor except in a few cases where the deposit contained forms of gold other than just bars (dust, amalgam, pieces, native grains). For these, each portion which consisted of bars is listed separately. Note that several deposits consisted of a large number of bars but that no attempt has been made here to list each portion separately; this method of summary was used to keep the length of the Table within reasonable limits.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	No. of Bars	Gross Weight lbs	oz	dwt	gr	Wt. After Melting lbs	oz	dwt	gr	Weight Loss oz	dwt	gr	% Weight Loss
7/5/31		21	8	6	0	21	8	4	4	0	1	20	0.035
	1		8	14	18		8	14	18	0	0	0	0.000
7/16/31		4	3	18	0	4	3	17	12	0	0	12	0.048
7/19/31		9	6	12	18	9	6	11	6	0	1	12	0.065
7/25/31		17	4	1	0	17	4	0	0	0	1	0	0.024
7/26/31		6	2	19	0	6	2	19	0	0	0	0	0.000
8/1/31		16	5	19	0	16	5	17	0	0	2	0	0.051
	2	1	7	8	12	1	7	8	6	0	0	6	0.168
		4	0	7	12	4	0	7	0	0	0	12	0.052
		3	10	5	0	3	10	4	12	0	0	12	0.054
8/2/31	3	3	4	7	18	3	4	7	6	0	0	12	0.062
8/8/31		1	8	0	6	1	8	0	0	0	0	6	0.062
8/12/31	2	1	0	3	0	1	0	3	0	0	0	0	0.000
8/13/31	164	143	9	1	0	143	8	12	18	0	8	6	0.024
8/16/31			8	7	0		8	6	12	0	0	12	0.299
			4	16	8		4	14	6	0	2	2	2.16
			10	4	14		10	4	10	0	0	4	0.081
	1		10	16	12		10	16	12	0	0	0	0.000
8/20/31	5	10	5	16	0	10	5	15	12	0	0	12	0.020
8/22/31		6	10	1	18	6	10	1	0	0	0	18	0.046
8/26/31		7	5	15	0	7	5	14	12	0	0	12	0.028
	1	2	9	12	12	2	9	12	12	0	0	0	0.000
		4	6	1	0	4	6	0	12	0	0	12	0.046
	2	1	8	1	12	1	8	1	6	0	0	6	0.062
8/26/31		11	7	12	0	11	7	11	0	0	1	0	0.036
8/30/31		11	1	3	0	11	1	1	0	0	2	0	0.075
			5	17	0		5	16	18	0	0	6	0.214
9/5/31			8	10	0		8	9	18	0	0	6	0.147
		9	1	15	12	9	1	14	12	0	1	0	0.046
9/6/31			8	13	6		8	13	0	0	0	6	0.144
9/9/31		4	2	8	0	4	2	7	12	0	0	12	0.050
9/10/31	1			11	4			11	4	0	0	0	0.000
9/13/31	3	5	11	12	12	5	11	12	0	0	0	12	0.035
	2	2	3	5	12	2	3	5	6	0	0	6	0.046
9/19/31		6	3	19	0	6	3	18	12	0	0	12	0.033
		16	10	14	6	16	10	13	12	0	0	18	0.018
9/23/31	1	1	1	4	6	1	1	4	6	0	0	0	0.000
			7	0	18		7	0	16	0	0	2	0.059
		16	7	1	0	16	6	19	0	0	2	0	0.050

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Date	No. of Bars	Gross Weight lbs	oz	dwt	gr	Wt. After Melting lbs	oz	dwt	gr	Weight Loss oz	dwt	gr	% Weight Loss
9/24/31		6	10	17	0	6	10	16	12	0	0	12	0.030
	1	1	5	3	0	1	5	3	0	0	0	0	0.000
9/27/31		13	0	15	0	13	0	12	12	0	2	12	0.080
		3	0	1	0	3	0	0	12	0	0	12	0.069
	1		7	3	6		7	3	6	0	0	0	0.000
	1		7	2	18		7	2	18	0	0	0	0.000
10/8/31		4	1	4	0	4	1	3	2	0	0	22	0.093
10/12/31		5	9	15	12	5	9	15	0	0	0	12	0.036
10/14/31			11	18	6		11	18	0	0	0	6	0.105
	82	86	11	9	10	86	11	1	10	0	8	0	0.038
10/26/31		12	0	4	2	12	0	2	22	0	1	4	0.040
11/7/31		2	0	3	0	2	0	2	10	0	0	14	0.121
		1	7	14	0	1	7	13	18	0	0	6	0.063
			6	0	0		6	0	0	0	0	0	0.000
		3	8	5	12	3	7	15	0	0	10	12	1.18
		4	8	10	0	4	8	9	8	0	0	16	0.059
	21	26	10	7	13	26	9	15	19	0	11	18	0.182
12/6/31	16	11	2	2	6	11	2	1	18	0	0	12	0.019
12/17/31	13	5	4	0	10	5	4	0	0	0	0	10	0.032
12/31/31		9	1	11	2	9	1	10	14	0	0	12	0.023
1/9/32	5	3	10	12	9	3	10	12	9	0	0	0	0.000
1/23/32		4	4	17	8	4	4	16	14	0	0	18	0.071
2/2/32	6	1	2	6	4	1	2	6	0	0	0	4	0.058
2/2/32	1		5	18	18		5	18	18	0	0	0	0.000
	2		1	3	12		1	3	12	0	0	0	0.000
	5	1	10	5	6	1	10	5	0	0	0	6	0.056
2/3/32	5	5	1	14	16	5	1	14	16	0	0	0	0.000
	13	5	0	0	0	4	11	19	12	0	0	12	0.042
2/4/32		6	4	10	6	6	4	10	0	0	0	6	0.016
2/10/32		7	1	5	18	7	1	5	6	0	0	12	0.029
3/6/32		4	6	15	0	4	6	12	12	0	2	12	0.228
	4	6	7	6	8	6	7	6	8	0	0	0	0.000
3/9/32		11	10	5	0	11	10	4	0	0	1	0	0.035
	2		10	14	12		10	14	8	0	0	4	0.078
3/14/32	1		9	18	0		9	18	0	0	0	0	0.000
	3	1	3	18	6	1	3	17	18	0	0	12	0.157
	17	9	6	6	12	9	6	5	18	0	0	18	0.033
	2		5	16	4		5	16	2	0	0	2	0.072
			7	0	12		7	0	10	0	0	2	0.059
	98	80	8	6	21	80	8	5	1	0	1	20	0.009

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Date	No. of Bars	Gross Weight lbs	oz	dwt	gr	Wt. After Melting lbs	oz	dwt	gr	Weight Loss oz	dwt	gr	% Weight Loss
3/27/32		16	5	9	0	16	5	8	0	0	1	0	0.025
4/4/32	1	2	1	13	6	2	1	13	6	0	0	0	0.000
	2	4	2	4	0	4	2	3	0	0	1	0	0.100
	3	2	8	12	0	2	8	10	18	0	1	6	0.192
	133	97	3	4	0	97	2	14	20	0	9	4	0.039
	7	3	4	8	12	3	4	8	0	0	0	12	0.062
4/6/32		29	10	11	12	29	10	9	12	0	2	0	0.028
		27	10	14	0	27	10	10	11	0	3	13	0.053
		11	9	10	16	11	9	7	18	0	2	22	0.103
		3	0	13	4	3	0	12	4	0	1	0	0.136
4/10/32	3	1	5	15	14	1	5	15	6	0	0	8	0.094
4/18/32	5	2	6	16	4	2	6	16	0	0	0	4	0.027
4/21/32	3	1	0	11	4	1	0	11	0	0	0	4	0.066
4/24/32		1	6	0	16	1	6	0	4	0	0	12	0.139
5/2/32	2	1	5	8	16	1	5	8	0	0	0	16	0.191
	2		6	19	12		6	19	6	0	0	6	0.179
5/8/32		27	2	4	12	27	2	3	12	0	1	0	0.015
5/10/32	59	58	7	3	3	58	6	1	4	1	1	23	0.156
	12	19	2	14	0	19	2	12	18	0	1	6	0.027
5/16/32		6	2	11	12	6	2	10	12	0	1	0	0.067
5/24/32		14	2	19	12	14	2	18	8	0	1	4	0.034
6/11/32		22	1	14	11	22	1	12	7	0	2	4	0.041
6/15/32	1		1	7	0		1	16	18	0	0	6	0.926
7/2/32	162	166	11	3	6	166	10	4	12	0	18	18	0.047
7/5/32	1		10	3	16		10	3	14	0	0	2	0.041
	2		8	3	18		8	3	18	0	0	0	0.000
7/7/32	2		5	12	10		5	12	6	0	0	4	0.148
		3	5	3	12	3	5	3	0	0	0	12	0.061
7/10/32		3	8	8	0	3	8	7	6	0	0	18	0.084
	3	6	5	6	18	6	5	6	0	0	0	18	0.048
7/14/32		1	6	1	0	1	6	0	20	0	0	4	0.046
7/16/32		3	4	13	0	3	4	12	12	0	0	12	0.062
	1		9	16	6		9	16	6	0	0	0	0.000
	2		7	12	12		7	12	10	0	0	2	0.055
7/20/32			6	15	8		6	15	8	0	0	0	0.000
7/25/32	2	1	5	13	10	1	5	13	0	0	0	10	0.118
7/30/32		32	6	17	0	32	6	14	6	0	1	18	0.022
8/22/32	2		5	17	14		5	17	9	0	0	5	0.177
9/3/32	2	1	5	8	21	1	5	8	12	0	0	9	0.107
9/4/32	3	4	5	7	12	4	5	6	6	0	1	6	0.117

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Date	No. of Bars	Gross Weight lbs	oz	dwt	gr	Wt. After Melting lbs	oz	dwt	gr	Weight Loss oz	dwt	gr	% Weight Loss
9/10/32		12	2	1	18	12	2	0	18	0	1	0	0.034
9/12/32	2		6	13	14		6	13	12	0	0	2	0.062
9/15/32		3	11	16	0	3	11	15	14	0	0	10	0.044
		7	2	11	0	7	2	10	6	0	0	18	0.043
	96	118	5	7	20	118	5	5	14	0	2	6	0.008
9/17/32		19	8	10	0	19	8	8	0	0	2	0	0.042
		9	8	18	12	9	8	16	18	0	1	18	0.075
		15	6	10	2	15	6	5	20	0	4	6	0.114
9/21/32		6	4	0	0	6	3	14	12	0	5	12	0.362
9/24/32		9	6	0	22	9	6	0	10	0	0	12	0.022
	15	13	0	12	19	13	0	11	4	0	1	15	0.052
9/26/32	3	5	7	5	0	5	7	3	18	0	1	6	0.093
	1	1	3	2	0	1	3	2	0	0	0	0	0.000
9/28/32		23	2	15	12	23	2	13	18	0	1	18	0.031
		5	2	15	18	5	2	14	22	0	0	20	0.066
10/3/32	2		9	2	0		9	1	6	0	0	18	0.412
		7	2	0	22	7	1	19	22	0	1	0	0.058
10/4/32	2	1	0	11	0	1	0	10	18	0	0	6	0.100
10/5/32		23	2	2	12	23	2	0	12	0	2	0	0.036
10/6/32		4	3	2	0	4	3	1	12	0	0	12	0.049
	1	1	1	1	14	1	1	1	14	0	0	0	0.000
10/11/32		5	8	0	0	5	7	12	0	0	8	0	0.588
10/12/32		8	2	3	0	8	2	2	0	0	1	0	0.051
10/13/32		6	2	5	6	6	2	4	18	0	0	12	0.034
10/18/32		3	0	10	18	3	0	9	18	0	1	0	0.137
		30	8	4	12	30	8	0	18	0	3	18	0.051
10/30/32		2	2	10	18	2	2	10	6	0	0	12	0.094
10/31/32	2	1	2	11	11	1	2	11	4	0	0	7	0.100
		3	2	15	6	3	2	14	18	0	0	12	0.064
		1	9	8	18	1	9	8	11	0	0	7	0.068
		1	6	3	22	1	6	3	14	0	0	8	0.092
			9	18	20		9	18	15	0	0	5	0.105
	1		9	15	0		9	15	0	0	0	0	0.000
	2	1	11	8	20	1	11	8	10	0	0	10	0.089
11/16/32		10	5	16	18	10	5	15	12	0	1	6	0.050
11/20/32		1	8	6	14	1	8	6	8	0	0	6	0.061
11/24/32	44	63	9	12	0	63	9	9	12	0	2	12	0.016
11/27/32	2		5	7	12		5	7	10	0	0	2	0.078
		4	1	6	0	4	1	2	0	0	4	0	0.406

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Date	No. of Bars	Gross Weight lbs	oz	dwt	gr	Wt. After Melting lbs	oz	dwt	gr	Weight Loss oz	dwt	gr	% Weight Loss
11/30/32	12	13	9	16	12	13	9	14	12	0	2	0	0.060
	194	202	9	10	0	202	8	15	23	0	14	1	0.029
12/10/32		19	11	7	0	19	11	6	2	0	0	22	0.019
12/20/32	1		9	12	0		9	12	0	0	0	0	0.000
12/24/32		7	8	11	0	7	8	10	14	0	0	10	0.023

An examination of the entries in the "Register of Gold Bullion Deposited" from 30 April 1831 to 31 December 1832 reveals an unambiguous total of 177 deposits of North Carolina bars and the date of deposit, gross weights, weights after melting, weight losses and percent weight losses for these are summarized in Table 7. The mean percent weight loss is calculated to be 0.092 and the average deviation of the mean is calculated as $\pm$ 0.007 %. If we let x equal the weight of bars and y equal the weight of coins in dwt in the first portion of Kent's deposit, then:

$$x + y = 579 \qquad (9)$$

$$\text{and} \quad 0.00092 + 0.00007\,x = 0.25 \qquad (10)$$

$$\text{from which} \quad x = 272 \pm \frac{22}{20} \qquad (11)$$

$$\text{and, substituting in (9),} \quad y = 207 \pm \frac{20}{22} \qquad (12)$$

In summary then, our calculations of the amounts of coins in each of the three deposits recorded in Mint tabulations, together with the five coins assayed in November 1830, give a range of weights melted as summarized in Table 8 and it is from these figures that we proceed to estimate the number of coins originally struck.

The value in United States coins of Deposit No. 1854 was $6,253 which is equivalent to 95.4¢ per dwt. Converting this figure from a basis of .984 fine to .987 fine yields a value of 95.7¢ per dwt for Reid's coins which can be used to convert the total weights melted to values melted. Table 8 summarizes the results which will be used later to make the estimates of the number of coins Reid struck.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 8

Estimated Range of Weights of Reid's Coins Melted at the U. S. Mint, 1830-32

Source	*Date*	*Estimated Weight Melted (dwt)* *Minimum*	*Mean*	*Maximum*
Five coins assayed	Nov. 1830	31	31	31
Deposit No. 1854	Jan. 1831	6,151	6,199	6,237
R. H. Patton's deposit	Aug. 1831	10	12	34
H. L. Kent's deposit	Sept. 1832	285	307	327
Total wt. of melted coins, dwt		6,477	6,549	6,629
Total value of melted coins, $		6,198	6,267	6,344

CATALOGUE OF EXTANT SPECIMENS OF REID'S COINS

In order to estimate the number of coins struck by Reid from the weights melted at the U. S. Mint it is necessary to determine with as much accuracy as possible the number of extant coins of each denomination and to record the results of the work as a census of each identifiable specimen. Toward this end approximately 2,000 records of public auction sales and dealer fixed price lists were searched. In the case of the $5 and $10 denominations, the records, in all but one or two instances, included an illustration of the coin offered so that positive identification according to significant surface marks and defects along with the written description would be made with ease. In the case of the $2.50 coins, however, identification of individual specimens was not so simple. In many instances, the auction catalogue or price list had no accompanying illustration and the description was not definitive. In some catalogues we could not be certain that the coin illustrated was the coin being sold and the doubt thus created dictated omission of such specimens from the identifiable list. Identification of the remainder was achieved by a combination of pedigree information,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

presence of recognizable surface marks or defects and a study of the characteristics of strike from photographs and catalogue illustrations when these were sufficiently clear. In Appendix 1 are summarized all sales of all denominations of coins wherein the auction catalogue or fixed price list had an unambiguous illustration while Appendix 2 summarizes all sales without illustrations or with ambiguous reproductions.

Early in the study it was observed that Reid's coins were nearly always struck noticeably off center on either obverse or reverse or both and it was found that with the aid of a simple estimating device this could be used as one significant identifying characteristic. The device was fashioned from an 80 mm square sheet of rigid, clear acrylic plastic on which were inscribed a series of concentric circles and a group of lines intersecting at the common center. A total of four lines was inscribed in such a way that the eight major vectorial angles of the circle were marked with 0° corresponding to north at the top. The concentric rings had diameters of 14 mm (the diameter of the inner ring on the $2.50 obverse), 18 mm (approximately one percent larger than the outside diameter of the $2.50 coins), 24.5 mm (approximately three percent larger than the outside diameter of the $5 coins), 33.5 mm (six tenths percent larger than the outside diameter of the $10 coins) and 40.2 mm. Placement of the device over the illustrations of the $2.50 coins to determine the off center direction was made in the following manner. For the obverse, the center of the device was placed over the lathe center dot on the coin (at the right conjunction of the upper and lower halves of the 8 in 1830) and the horizontal diameter (90° - 270° line) was rotated until it divided the date numbers in half horizontally. The 0° radius then just touched the left side of the stand of R in GEORGIA and the 180° radius just touched the right side of the O in GOLD. On the reverse no lathe center dot is visible on the coins. The device was placed so that the innermost circle was concentric with the ring formed by the letters T. REID ASSAYER and the 0° line fell along the vertical stroke of the 5 in 2.50. In this position, the 0° line split the space between R and E in REID, the 180° line just touched the left serif of the left diagonal of Y and the 90° - 270° line divided the 2 and 0 in 2.50 unevenly with the large portion uppermost. The off-center direction was estimated as the vectorial angle cor-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

responding to the displacement of the die center from the flan center at the time of striking. After some practice, it was found that careful placement of the measuring device over the illustration (or the coin itself, if available) permitted a precision of measurement of the off-center vectorial angle of $\pm$ 5° and the values recorded in the Catalogue below should be considered accurate within this range. In general it was not found possible to measure the die center—flan center linear separation from the photographs or reproductions thereof but such a measurement could be made with precision on the coins themselves. However, it was observed that the separation was nearly always much greater on the obverses than on the reverses which suggests that the reverse die was mounted in the anvil while the obverse was mounted to the screw of the coining press.

Much the same procedure was followed for the $5 coins on which the lathe center dot is present on both sides. For the obverse, with the device center over the design center, the 90° - 270° diameter is rotated until it divides the $ and 5 equally in the horizontal direction. The 90° radius is then found to lie along the left side of the upright of L in GOLD while the 270° radius splits the space between E and O in GEORGIA. For the reverse, the device center is placed over the design center as described for the obverse and the 90° - 270° line is seen just to touch the right serif edges of the E in REID (90° radius) and the first E in TEMPLETON (270° radius).

There are two varieties of the $10 piece and that with date was the first of the two to be struck by Reid.[12] Since no lathe center dot is present on either side of the dated $10, it is necessary, for the obverse, to place the centering device so that one of the circles thereon is concentric with the ring formed by the letters GEORGIA GOLD. The 90° - 270° diameter is adjusted to divide the date numerals in half horizontally whereupon the 0° radius is seen to lie along the left side of the upright of the letter R and the 180° radius splits the space between O and L. For the reverse, one of the device circles is made concentric with the ring formed by TEMPLETON REID ASSAYER and the 90° - 270° diameter is adjusted to lie along the tops of the letters in DOLLARS.

[12] Seymour, n. 55.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

For the obverse of the undated $10, the ring of stars is used as the design center locating device and the 90° - 270° diameter of the device is placed so as to divide equally the space between GEORGIA and GOLD. In this position the 0° radius passes just right of the center of R in GEORGIA while the 180° radius grazes the upper and lower left serifs of the L in GOLD. The reverse die is the same as used for the dated variety; therefore, the method of off center estimation is identical.

In the Catalogue are summarized the characteristics of the presently-identified specimens of the $2.50, $5 and $10 dated and undated coins. It can be seen that 24 specimens of the $2.50, 8 of the $5.00, 4 of the dated $10.00 and 3 of the undated $10.00 denominations are positively identified by the means available. This is not to aver that additional specimens of each denomination will not appear in the future and, indeed, such new appearances in the case of the $2.50 coins may be taken for granted. In fact, it is likely that many of the sales of $2.50 coins recorded in Appendix 2 involved specimens other than those identified here; there are simply too many of them to permit any other conclusion. It should be noted too that a total of 27 of the offerings in Appendix 2 had no illustration of the coin and 3 did not specify that the coin illustrated was the one to be sold; such records are of no more than general statistical interest.

As for the $5.00 and $10.00 coins, it can be seen from Appendix 2 that there are but few instances where offerings were made which did not illustrate the coin involved and from this it may be inferred that the chance for new specimens to appear is far less than for the $2.50 denomination. As will be seen from the following, we have taken this into account in our estimation of the number of coins struck by Reid in 1830.

As stated earlier, a calculation of the total number struck can be made from a knowledge of the number of extant specimens of each denomination by making the assumption, reasonable in our case, that the ultimate disposition of the coins was a random process and, therefore, they have survived in essentially the same ratios as struck. From Table 8 we take the estimated dollar value range for the coins melted at the U. S. Mint, assign dollar values to each coin of the three denominations[13] and proceed to make the calculation as follows:

[13] Seymour, p. 241.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Let n = the total number of coins stamped by Reid,
then 24/39 n = the number of $2.50 coins, value $2.27 each,
8/39 n = the number of $5.00 coins, value $4.78 each,
and 7/39 n = the number of $10.00 coins, value $9.58 each.

We then write:

$$(2.27 \times 0.615)n + (4.78 \times 0.205)n + (9.58 \times 0.179)n = 6{,}267 \quad (13)$$

$$4.09n = 6{,}267 \quad (14)$$

$$n = 1{,}532 \quad (15)$$

The first part of Table 9 summarizes the range of values for total number and numbers of individual denominations calculated as noted above and based on a total of 39 extant coins. If there proved to be nine more $2.50, two more $5.00 and one more $10.00 specimens than our study has identified, the number of coins struck by Reid would be somewhat higher and the second part of Table 9 gives the results of the calculation based on that assumption. There is seen to be a small but significant increase in the total number of coins struck but this would not occur if the *ratios* between denominations remained constant. We can say with some confidence that Reid struck between 1,500 and 1,600 coins composed of approximately 62 percent $2.50, 20 percent $5.00 and 18 percent $10.00.

TABLE 9

Range of Calculated Number of Coins Struck by Templeton Reid in 1830

	Minimum	*Mean*	*Maximum*
Total No.[a]	1,515	1,532	1,551
No. of $2.50	932	943	955
No. of $5.00	311	314	318
No. of $10.00	272	275	278
Total No.[b]	1,597	1,615	1,635
No. of $2.50	1,044	1,056	1,069
No. of $5.00	307	310	314
No. of $10.00	246	249	252

[a] Based on a total of 39 extant specimens.
[b] Based on a total of 52 extant specimens.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Our study included examination of the possibility of die varieties amongst Reid's 1830 coins and, since only two actual specimens were available to us, it was necessary to resort to a method developed by Orestes H. Zervos in his study of ancient coins from Egypt.[14] It is based on preparing a map of the coin by outlining the significant features with a multiplicity of tiny ink dots carefully applied by means of a size 3/0 Kohinoor Rapidograph drafting pen to a sheet of frosted plastic

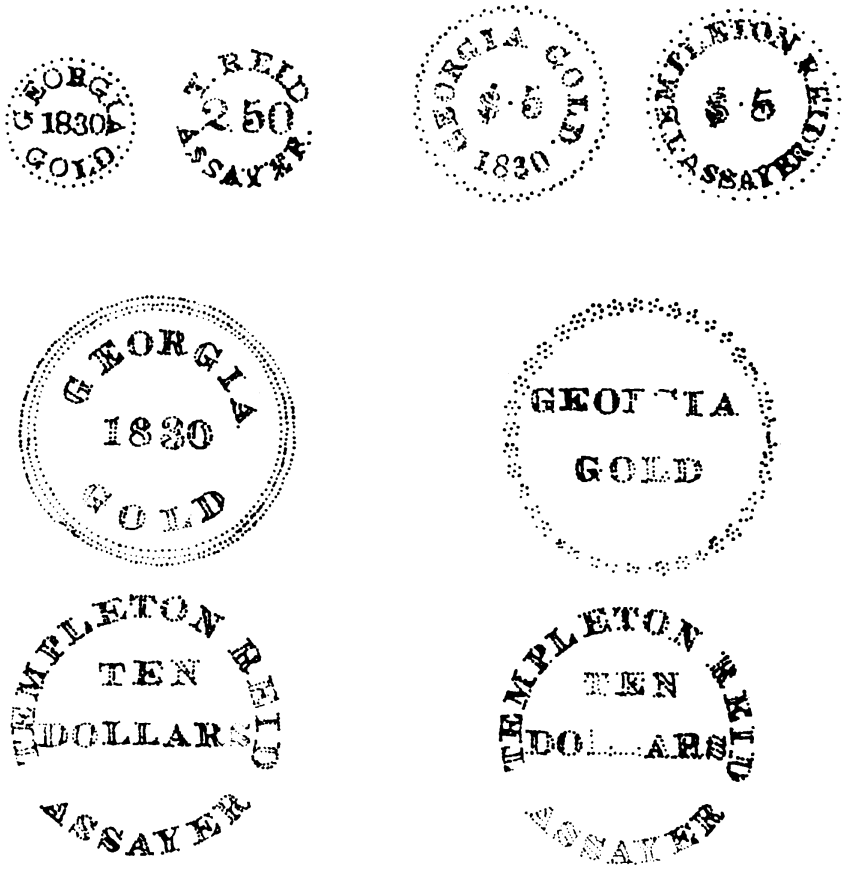


FIG. 1. Die variety maps of Reid coins.

[14] Private communication.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

which, in use, is placed over the catalogue or other reproduction so as to align, if possible, the two images. The maps prepared for the four types of Reid's coins are shown in Fig. 1. We chose to use photographs of the coins illustrated in the "Redbook"[15] and kindly supplied by Kenneth Bressett of Western Publishing Company since they were all very close to 1:1 scale (important since the maps would be used mostly to study catalogue reproductions which seem always to be close to or in 1:1 ratio) and were of good clarity with fine details readily discernible. The maps can be used if the scale of the reproduction under study is somewhat different than 1:1 but the difference cannot be more than 10 to 15 % if a reliable result is to be obtained.

With the aid of the maps we examined all reproductions, photographic or otherwise, of appropriate scale in the catalogue and price list records searched in this study and did not find any die variations. Apparently the only die with which Reid had trouble was the dated $10.00 obverse which, in all likelihood, failed in use and was replaced by the undated die. It is possible, of course, that the two types were used concurrently—the reverse die is the same on all known specimens of both types—but the relative crudity of the letters, some of the stars and the layout of the undated obverse when compared to the dated die suggests that the undated one was prepared rather hurriedly.

In addition to those specifically cited, the author would like to express his deep appreciation to the following institutions and individuals: The American Numismatic Society for the use of its library and extensive catalogue files; Vladimir Clain-Stefanelli, Smithsonian Institution; Carl Carlson, formerly Johns Hopkins University; Kathleen Plourd, Connecticut State Library for photographs of the coins in the collections under their charge; to Jerry Cohen, Don Kagin, Jack Klausen, Abe Kosoff, Jess Peters and Norman Stack for photographic reproductions and pedigree information; to Eric Newman and Don Taxay for advice and encouragement; and to my wife, Josephine, for endless patience and inestimable help searching sale records.

[15] R. S. Yeoman, *A Guide Book of United States Coins*, ed. K. E. Bressett, 30th rev. ed. (Racine, 1976), pp. 218–19. Hereafter cited as "Redbook."

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CATALOGUE

$10.00 UNDATED COINS

1 (AU)

Obv.: *Centering* - Cent'd. *Denticles* - Missing 255°. *Stars* - 40, all six-pointed; numbering consecutively from the one at upper l. of first G, in GEORGIA, stars 7–16 double cut, 37–40 and 1–5 weakly struck.
Identifying Marks - Small nick in field below r. stand of A and vertical gouge above 27th star. Small pit on 90° radius below l. stand of A; another above apex on 37.5° radius. Two small pits at inner points of 15th star. Small edge ding at 315° between 3rd and 4th stars. First G in GEORGIA and GOLD not fully struck up.

Rev.: *Centering* - 90°. *Denticles* - Missing 30° to 97.5°; slightly doubled 315° to 30°. *Ring of Dots* - Faintly visible 225° to 255° and 300° to 330°
Identifying Marks - Nick in field above LL. Another across lower part of second and third strokes of M. Large pit in field almost touching upper l. serif of E in REID (at 67.5°); small one between MP on 300° radius. Also on 300° radius, small nick on denticles and an edge ding. Small nick on right upright of N in TEN; radial scratch from upper l. serif of R in ASSAYER toward center of coin. Die defect in lower curve of S in DOLLARS plain.

Mint Cabinet coin; T. L. Comparette, *Catalogue of the Coins, Tokens, and Medals in the Numismatic Collection of the Mint of the United States at Philadelphia, Pennsylvania* (Washington, 1912 or 1914) 1587.

2 (EF)

Obv.: *Centering* - Cent'd. *Denticles* - Faintly visible 330° to 180°. *Stars* - 40, all six-pointed; stars 11–36 double struck with many only fractionally struck up.
Identifying Marks - Most noteworthy characteristic is double striking of obverse. Die rotated approx. 2.5° counterclockwise

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

and was displaced slightly to l. on the final blow; this accounts for difficulties with stars. Faint outlines of parts of GEORGIA and GO can be seen intermingled with corresponding letters. None of letters boldly struck, but RG particularly weak. Edge ding above 15th star (at 60°).

Rev.: *Centering* - 180°. *Denticles* - Fairly well struck 120° to 15°, balance weak. *Ring of Dots* - None visible.
Identifying Marks - Curved scratch starts next to l. stand of A in DOLLARS, passing through T of TEN toward P; another starts at top of R in ASSAYER and continues toward center of coin. Five small nicks in field below RE (at 60° to 75°); another just below l. foot of l. stroke of N in TEN. Small rim nick above second T in TEMPLETON (at 0°). Edge ding over upper l. serif of P (at 300°) corresponding to that at 60° on obv. LL very weakly struck as are l. bottom of E in TEN and top of r. stand of N in TEMPLETON.

Virgil Brand; Byron Reed; Smith & Son; Charles Green; Stack's; Lilly; Smithsonian. The "Redbook" coin.

3 (BU)

Obv.: *Centering* - 30°. *Denticles* - Weakly struck 330° to 45°. *Stars* - 40; all six-pointed; stars 22, 23 and 24 have heavy lobes; all well struck without doubling.
Identifying Marks - Nick or pit in field on 22.5° radius to 10th star. Myriad light scratches in field in sector between 120° and 225° radii. All letters well struck. Much mint luster over field generally.

Rev.: *Centering* - 270°. *Denticles* - Visible 315° to 225°. *Ring of Dots* - Well struck 105° to 345°, weak 345° to 45°, missing 45° to 105°. *Identifying Marks* - Small nick in field over l. upper serif of N in TEN (at 15°); another just below l. foot of first stroke of M (at 285°). Five light vertical scratches in field above SSA. LL only faintly visible, bottoms of TE in TEN and l. side of A in DOLLARS weakly struck. All remaining letters strong; much luster in field generally.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Kreisberg-Schulman, Ball Collection (21 May 1966) 1514; private collection. According to papers in possession of J. Bennett, Athens, Ga., coin was found in old family sewing basket by Elizabeth Henrick of Atlanta and consigned to G. M. Todd of Atlanta, who recorded its weight as 246.5 gr (15.97 g) and sold it to B. Dubose of Atlanta. He resold it to William Mertes of Chicago, who sold it to a private collection (Ball?).

$10.00 DATED COINS

4 (EF)

Obv.: *Centering* - 105°. *Denticles* - 163; well struck all around. *Inner Rings* - 150 denticles; first ring somewhat weak 30° to 45°; die not completely filled except 240° to 330°; second ring weak 30° to 45°.
Identifying Marks - Small circular pit on outer denticles at 315°; another on inner denticles at 0°. Tiny rim nick at 202.5°. 8 and upper part of 3 struck from filled die. Lower r. section of first G in GEORGIA not fully struck up. Small nick in field between tops of LD (at 157.5°).

Rev.: *Centering* - Cent'd. *Denticles* - All weak or missing. *Ring of Dots* - None visible.
Identifying Marks - Large X scratched in field below first L of DOLLARS (at 195° to 210°). Group of seven nicks in field above RS (at 52.5° to 75°). LL and lower r. part of A not fully struck up. Die defect in lower curve of S in DOLLARS.

Col. Green; Smith & Son; Stack's; Lilly; Smithsonian.

5 (AU)

Obv.: *Centering* - 75°. *Denticles* - 163; well struck all around. *Inner Rings* - First well struck all around; second weak 300° to 315°. *Identifying Marks* - Large nick across l. middle of curve of G in GOLD; another similarly placed on second G in GEORGIA. Nick on upper portion of upright of R. Diagonal scratch along l. side of E (on 315° radius); another r. of 0 in date sloping downward. Projection of spur of metal from bottom of 8 indicates chipping of die.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: *Centering* - Cent'd. *Denticles* - Faintly visible 90° to 180° and 255° to 285°. *Ring of Dots* - None visible.
Identifying Marks - Nick across upper half of upright of R in REID; another large one projecting outward from bottom of upright of R in ASSAYER (at 135°). Pit in field above upper l. serif of E in ASSAYER (on 157.5° radius); another midway between first L and second S of ASSAYER. Nick in field between tops of LL and above upper r. serif of M.

The "Redbook" coin; present whereabouts unknown.

6 (VG)

Obv.: *Centering* - Cent'd. *Denticles* - Fairly well struck all around. *Inner Rings* - Strong 135° to 225°; balance appears weak or nearly missing; second strong 135° to 210°, weak 210° to 345° missing 345° to 135°.
Identifying Marks - Date and D of GOLD weakly struck. Heavy rim ding over second G of GEORGIA (at 45°) and smaller one at 285°. Large nick in field below r. side of G in GOLD.

Rev.: *Centering* - Cent'd. *Denticles* - None visible. *Ring of Dots* - None visible.
Identifying Marks - LA, AYE, N all weakly struck. Heavy edge ding over LE (at 315°) corresponds to that at 45° on obv. Two large scratches in field above DOLLARS: first touches D and slopes up to r., second slightly above first and slopes down to r. Large nick in field below YE (at 165°).

Kreisberg-Schulman (7 April 1967) 601; Kreisberg-Cohen, Moskovitz Collection (16 February 1977) 1485; Clifford-Kagin.

7 (VG)

Obv.: *Centering* - Cent'd. *Denticles* - Visible only 315° to 45°. *Inner Rings* - First visible only 270° to 45°; second visible only 270° to 45°.
Identifying Marks - Small pit in field above l. curve of second G in GEORGIA (at 22.5°); another below and to l. of 1 in date (at 255°); two above O in GOLD (at 187.5° and 202.5°). Entire surface of coin pockmarked with tiny nicks. 8 appears to have been struck from filled die. Bulge above GE (at 315°).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: *Centering* - Cent'd. *Denticles* - None visible. *Ring of Dots* - None visible.
Identifying Marks - Large dig in field above first S in ASSAYER (at 210°). Small nick above upright of R in DOLLARS (at 75°). Dent touching upright of R in REID (at 45°) corresponds to obv. bulge at 315°. Top of first T and bottoms of AS weakly struck. Entire surface covered with small nicks.

In 1975 the following measurements were recorded after examination of coin: 15.8233 g, 19.04 specific gravity; 34.4 mm $\pm$ 0.1 mm diameter. Numismatic Gallery (2 March 1948) 940; private collection.

$5.00 COINS

8 (AU)

Obv.: *Centering* - Cent'd. *Denticles* - Very weakly struck all around. *Inner Ring* - Well struck all around; ding at 97.5°.
Identifying Marks - Nicks at top center and diagonally across r. center of S in $; another just above middle of upright in R. Two nicks at top of O in GOLD; another in field above G (at 52.5°). Small pit with raised edge on one side in field touching lower l. curve of first G in GEORGIA and small raised dot in field directly below l. side of upright of 1 in date.

Rev.: *Centering* - Cent'd. *Denticles* - Well struck all around. *Ring of Dots* - 151; dots visible all around.
Identifying Marks - Nick across middle of l. stand of M; another across upper r. curve of R in REID. Two nicks at upper l. of second S; large one across top of upright of R in ASSAYER. Pit in field almost touching upper r. tip of 5. Diagonal nick in field just touching l. foot of first T. Edge cut at 352.5°.

Mint Cabinet coin; Comparette, 1588.

9 (EF/F)

Obv.: *Centering* - 285°. *Denticles* - Missing 165° to 30°. *Inner Ring* - Well struck all around; heavy scratch across at 45°.
Identifying Marks - First G in GEORGIA not fully struck up in lower r. portion. Nick on upper r. edge of upright of I. Large

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

pit in field between and below A and G (at 22.5°). Two diagonal scratches in field at 142.5° just inside inner ring. Field generally has many small pits; apparently planchet was porous (see below). Edge nicks at 345° and 75°.

Rev.: *Centering* - 285°. *Denticles* - Missing 195° to 315°, faint from 315° to 30° and 135° to 195°; obliterated by solder marks 30° to 135°. *Ring of Dots* - Visible only 345° to 45° and 135° to 210°; obliterated from 45° to 135° by solder marks; balance not struck up.

Identifying Marks - Small nick just above l. foot, in upright of first E in TEMPLETON; lower stroke of this E not fully struck up. Top of O not fully struck up. Heavy dig in top of field enclosed by D. Light, nearly vertical scratch on upper l. curve of first S in ASSAYER. Large pit in field just above $ (at 330°). Heavy scar on rim at 75° where loop was clumsily removed. Entire rev. surface covered with myriad small pits giving grainy appearance.

Col. Green; Smith & Son; Stack's; Lilly; Smithsonian.

10 (BU)

Obv.: *Centering* - 330°. *Denticles* - Well struck 75° to 225° and may be so all around (catalogue reproductions not definitive). *Inner Ring* - Well struck all around; may have small nick at 247.5° on inner edge.

Identifying Marks - Bottom stroke of E in GEORGIA not fully struck up at extreme right end. There may be small field nick just inside inner ring at 30° (catalogue reproductions not definitive). No other marks discernible.

Rev.: *Centering* - Cent'd. *Denticles* - Well struck all around. *Ring of Dots* - Well struck all around.

Identifying Marks - Tiny nick in field just to r. of 5. No other marks discernible.

Howland Wood; Newcomer; Boyd; Kosoff (H. M. F. Schulman F. P. L. 26 [1946], pp. 14–15); Williams; Melish; Kosoff, Melish Collection (28 April 1956) 2339; private collection.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

11 (EF)

Obv.: *Centering* - Cent'd. *Denticles* - Visible all around although weakly struck. *Inner Ring* - Well struck all around; no damages.
Identifying Marks - Tiny nick at apex of A; another at top of S in $ just to l. of vertical strokes. Diagonal nick in field between D and period (at 127.5°). Serious edge ding at 225°, smaller one at 300°. Drill point dot near top of upright in R.

Rev.: *Centering* - Cent'd. *Denticles* - 119; well struck all around. *Ring of Dots* - 151; well struck all around.
Identifying Marks - Small pit in field just above bottom l. serif of R in ASSAYER (at 135°) and another between tops of A and S (at 217.5°). Large vertical nick in field halfway between 5 and RE (at 75°). Large nick in field between EM (at 270°) touching l. serif of l. stand of M. Rim nick at 37.5°. Large obv. ding at 225° is just visible on rev. edge at 120°. Drill point dots near top of upright in R of REID and ASSAYER.

Chapman, Nygren Collection (29 April 1924) 19; Garrett; Johns Hopkins University.

12 (EF)

Obv.: *Centering* 255°. *Denticles* - Missing 195° to 37.5° *Inner Ring* - Weak 202.5° to 277.5°.
Identifying Marks - Dig in field below A (at 0°); another just l. of lower part of 5 (at 150°). Two small pits in field just below $ (at 225° and 240°), another above l. side of 8 (at 195°) and third above upright of D (at 120°). Cataloguer noted ". . . traces of mounting on both sides . . ." but none can be seen in catalogue reproduction.

Rev.: *Centering* - 255°. *Denticles* - Faintly visible 330° to 45° and 135° to 180°; balance missing. *Ring of Dots* - visible 225° to 45°.
Identifying Marks - Digs in field above second A and below R in ASSAYER (at 180° and 135° respectively; another below upright of D (at 112.5°). Trace of mounting not visible.

Morgenthau (18 October 1933) 237; present whereabouts unknown.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

13 (AU)

Obv.: *Centering* - Cent'd. *Denticles* - Missing 345° to 105°; remainder appear weak. *Inner Ring* - Weak 300° to 330° and around 135°; balance well struck.
Identifying Marks - Nick across middle of r. stand of A. Small pit and light vertical nick in field between 5 and 0 in date (at 150°); another pit in field between 5 and l. foot of L (at 75°).

Rev.: *Centering* - Cent'd. *Denticles* - Well struck all around. *Ring of Dots* - 151; well struck all around.
Identifying Marks - Small nick on lower half of upright of E in REID, two more on r. side of curve of 5. Two vertical scratches in field between 5 and second T in TEMPLETON (at 7 1/2° and 15°). Raised dot in field resting on lower left serif of D (at 105°). Right portion of bottom stroke of first E not fully struck up. Drill point dot near top of upright of R in ASSAYER.

The "Redbook" coin; present whereabouts unknown.

14 (AU)

Obv.: *Centering* - Cent'd. *Denticles* - Weak or missing 135° to 15°. *Inner Ring* - well struck all around; no damages.
Identifying Marks - Nick across upper r. corner of G in GOLD. (at 45°). Small pit just below center of upright of 1 (at 202.5°). Shallow pit in field just below and to r. of lathe center dot. Large nick in field almost touching l. curve of first G in GEORGIA (at 217.5° to 225°). Bottom stroke of E appears incompletely struck up.

Rev.: *Centering* - 225°. *Denticles* - Weak or missing 165° to 255°. *Ring of Dots* - 151; well struck all around.
Identifying Marks - Nick or dent across bottom stroke of first E in TEMPLETON; this stroke appears incompletely struck up. Light scratch in field starting at l. fork of Y and extending downward toward rim (at 165°). Bottoms of stands of first T and I dimpled in center.

Vinchon, Tourres Collection (28 March 1968) 263; Clifford-Kagin.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

15 (EF)

Obv.: *Centering* - Cent'd. *Denticles* - Missing 180° to 300°; appear weak 300° to 180°. *Inner Ring* - Slightly weak 345° to 30°.
Identifying Marks - Large dig in field above upper l. corner of $ (at 315°); another centered below O in GOLD (at 67.5°). Small raised dot in field touching inside of inner ring at 150°. Drill point dot near top of upright of R.

Rev.: *Centering* - Cent'd. *Denticles* - Visible all around. *Ring of Dots* - Well struck 135° to 30°; balance missing in reproduction.
Identifying Marks - Serious edge ding at 270° and smaller one at 225°. Bottoms of TEMP not fully struck up. No other marks or damages visible.

Illustrated in W. Raymond, *Standard Premium List of All Rare United States and Early American Coins* (New York, 1930), p. 25 and in later editions; present whereabouts unknown.

$2.50 COINS

16 (AU)

Obv.: *Centering* - 105°. *Denticles* - 87; weak 240° to 345°. *Inner Ring* - Weak 135° to 210°. *Identifying Marks* - Defect in lower half of 1 in date. Nicks on l. curve of first G in GEORGIA and G of GOLD. Drill point dot near top of upright of R.

Rev.: *Centering* - Cent'd. *Denticles* - Missing 195° to 210°.
Identifying Marks - Nicks in field to l. of I in REID and above second A in ASSAYER. Bottoms of SAYE and top of D somewhat weakly struck.

Mint Cabinet coin; Comparette (1912), 1651; (1914), 1589.

17 (EF)

Obv.: *Centering* - 195°. *Denticles* - 87; weak 337.5° to 67.5°. *Inner Ring* - Weak 345° to 15°; serious dig at 135°.
Identifying Marks - Two small nicks in field at 0° above R in GEORGIA; two on top of 0 in date. G of GOLD and 1 of date not fully struck up.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: *Centering* - 300°. *Denticles* - Missing 180° to 75°.
Identifying Marks - Heavy rim nick at 300° over T and small one at 45° between I and D Tops of T. RE weakly struck. Drill point dot near top of upright of R in ASSAYER.

Col. Green; Smith & Son; Stack's; Lilly; Smithsonian.

18 (VF)

Obv.: *Centering* - 210°. *Denticles* - Weak and missing 120° to 255°.
Inner Ring - Weak and missing 120° to 255°.
Identifying Marks - Small rim dent at 345°. Nick at top of O in GEORGIA and across upper l. of G and lower l. of O in GOLD.

Rev.: *Centering* - 270°. *Denticles* - weak and missing 120° to 90°.
Identifying Marks - Rim dents at 270° and 315°. Two nicks at top and one at bottom of 0 in $2.50. Three scratches in field below 2 of $2.50. Bottoms of SAYE and top of T weakly struck.

Conn. State Library (Mitchelson) Collection, bequeathed in 1913.

19 (EF)

Obv.: *Centering* - 195°. *Denticles* - 87; all strong. *Inner Ring* - Weak at 315° and from 345° to 15°.
Identifying Marks - Serious edge ding at 352.5°. Base of 1 in date not fully struck up.

Rev.: *Centering* - 315°. *Denticles* - Visible 330° to 135°.
Identifying Marks - Possible scratch under EI of REID. L. stand of first A and top of T not fully struck up. Drill point dot near top of upright of R in ASSAYER.

Univ. of Pa. (R. C. H. Brock) Collection, at the University in 1898.

20 (VF)

Obv.: *Centering* - 225°. *Denticles* - Weak 150° to 270°. *Inner Ring* - Weak 195° to 225°.
Identifying Marks - Small nick in upper l. of O in GOLD.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: *Centering* - 330°. *Denticles* - Weak 195° to 225°.
Identifying Marks - Two digs in top of 2. Small nick in field between YE of ASSAYER. Top of T somewhat weakly struck.

Chapman, Zabriskie Collection (4 June 1909) 437; Ellsworth; Garett; Johns Hopkins University.

21 (AU)

Obv.: *Centering* - 45°. *Denticles* - 87; all strong. *Inner Ring* - Well struck all around; small nick at 277.5°.
Identifying Marks - Nicks across lower half of 1 and lower l. curve of 8 in date and on lower r. serif of E in GEORGIA. Two horizontal scratches in field under O of GEORGIA.

Rev.: *Centering* - Cent'd. *Denticles* - All missing.
Identifying Marks - Nick in field between tops of T.R. Scratch in field above upper r. corner of 2 and below second S in ASSAYER.

Clifford-Kagin.

22 (BU)

Obv.: *Centering* - 195°. *Denticles* - Weak 195° to 15°. *Inner Ring* - Weak 210° to 345°.
Identifying Marks - Small nick in field below r. foot of 1 in date. Upper l. curve of first G, bottom of upright in R and lower r. side of second G in GEORGIA have indentations due to incomplete flow of metal into die. Horizontal die finishing marks around GI of GEORGIA and date.

Rev.: *Centering* - Cent'd. *Denticles* - Weak and missing 255° to 45°.
Identifying Marks - REID weakly struck, especially tops of letters. Large nick through center of upright of T. Faint trace of drill point dot near top of upright of R in ASSAYER.

Newcomer; Boyd; Kreisberg F.P.L., *Num* (April 1971), p. 533 and (April 1972), p. 279; Kreisberg, Beck Collection 2 (12 February 1976) 606; Rare Coin Co. of America.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

23 (EF)

Obv.: *Centering* - 165°. *Denticles* - 87; weak 315° to 345° and 120° to 165°. *Inner Ring* - Well struck all around; no damages.
Identifying Marks - Distinct nick across middle l. of curve of second G in GEORGIA and another just below crossbar of that letter. Faint nick at middle of l. curve of O in GOLD and another on upper l. curve of 0 in 1830. Small nick at top of upright of E. Drill point dot near top of upright of R. Tiny raised dot in field above upper l. curve of 8. Small edge nick at 330°.

Rev.: *Centering* - 315°. *Denticles* - Visible only 90° to 195°.
Identifying Marks - Top of T somewhat weakly struck. Small nicks in field at bottom of 2 and to l. of R in REID; two others across top of same R and upper portion of upright in T. Drill point dot near top of upright of R in ASSAYER.

Chapman, Charles Gregory Collection (22 June 1916) 2283; Chapman (28 June 1917) 353; Numismatic Gallery, Lawson Collection (26 August 1947) 462; Kreisberg-Cohen (12 September 1973) 1366; American Auction Association, Herstal Collection (8 February 1974) 803; present whereabouts unknown.

24 (VF)

Obv.: *Centering* - 210°. *Denticles* - All well struck. *Inner Ring* - Well struck all around; no damage.
Identifying Marks - Sharp edge nick or test cut at 135°. No other obvious marks or damages.

Rev.: *Centering* - Cent'd. *Denticles* - Faintly visible only from 75° to 105°.
Identifying Marks - Two small nicks in field at 270° and 277.5° just inside rim. Small diagonal nick across middle portion of 5.

Stack's, J. F. Bell Collection (9 December 1944) 1051; Stack's, George O. Walton Collection (4 October 1963) 2179; Stack's, Gibson Collection (11 November 1974) 152; Rare Coin Company of America.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

25 (G-VG)
F

Obv.: *Centering* - 225°. *Denticles* - Missing 150° to 300°. *Inner Ring* - Missing 150° to 210°.
Identifying Marks - Slight edge nick at 135°. GOL in GOLD very weakly struck (G barely visible). Transverse nick in upper r. leg of A. Vertical scratch in field below E of GEORGIA.

Rev.: *Centering* - 285°. *Denticles* - Missing 105° to 210°.
Identifying Marks - Bottoms of SA and all of YER very weakly struck. Large nick across center of 2. Two small nicks in field to l. of R in REID; another to l. of l. foot of A in ASSAYER.

Mehl 35, B. W. Smith Collection (25 May 1915) 404; Mehl 50, Sears Collection (29 October 1918) 65; Mehl 55, New Orleans Collection (19 November 1919) 810; Mehl 71, Slack Collection (5 May 1925) 71; present whereabouts unknown.

26 (EF)

Obv.: *Centering* - 195°. *Denticles* - Weak 315° to 60°. *Inner Ring* - Well-defined all around; small imperfection at 105°; five small nicks 105° to 120°.
Identifying Marks - Three digs in E; one at top and one at center of upright, third in center of bottom horizontal stroke. Two small nicks at top and l. of curve of first G in GEORGIA. Small circular pit in field between upper parts of G and I. Small diagonal nick across upper l. corner of upright of R.

Rev.: *Centering* - Cent'd. *Denticles* - Not visible.
Identifying Marks - Top of T weakly struck. Small nicks across upper r. corner of E and upper half of I in REID. Small raised dot on outer edge of r. stand of first A in ASSAYER the enclosed spaces of the letters of which appear encrusted with black dirt.

Offered to author privately 4 March 1974 by A. Kreisberg Corp.; present whereabouts unknown.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

27 (EF)

Obv.: *Centering* - 195°. *Denticles* - Well defined all around. *Inner Ring* - Somewhat weak 345° to 45°. Traces of small bruise at 330°. *Identifying Marks* - No discernible marks or damages.

Rev.: *Centering* - 315°. *Denticles* - Missing 210° to 360°. *Identifying Marks* - Top of E in REID and bottoms of ASS in ASSAYER somewhat weakly struck. Drill point dot near top of upright of R in ASSAYER.

Morgenthau (18 October 1933) 236; present whereabouts unknown.

28 (F)

Obv.: *Centering* - 225°. *Denticles* - Weak 225° to 300°. *Inner Ring* - Slightly weak 180° to 195°. *Identifying Marks* - Rim from 0° to 135° worn noticeably flat. No significant damages or marks. Sweating not visible this side.

Rev.: *Centering* - 0°. *Denticles* - None visible. *Identifying Marks* - T and rim from 255° to 360° appear weak from wear. No significant marks or damages are visible. Sweated at Y (165°).

Chapman, Nygren Collection (29 April 1924) 22; present whereabouts unknown.

29 (VF)

Obv.: *Centering* - 210°. *Denticles* - Well struck 255° to 150°; damaged and retooled at 45° where loop was removed. *Inner Ring* - Well struck all around; retooled at 45° to 60° where a hole was soldered. *Identifying Marks* - Nicks in field just above and to r. of first G and touching upper r. side of O in GEORGIA. Nick in field above upper r. curve of G in GOLD. Bent surface at 255°. Plugged and retooled over GI (60°).

Rev.: *Centering* - 60°. *Denticles* - Not visible in reproduction. *Identifying Marks* - Dig in field above 0 in $2.50. Concave bend in field to r. of R in ASSAYER (at 105°). Plugged and retooled above l. stroke of T (at 300°).

Stack's, Bolt Collection (22 April 1966) 1124; present whereabouts unknown.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

30 (EF)

Obv.: *Centering* - 180°. *Denticles* - Well struck all around. *Inner Ring*- Weak 135° to 180°.
Identifying Marks - Centering is by far the worst seen on any of Reid's coins, a diagnostic for this coin. No significant marks or damages visible.

Rev.: *Centering* - 285°. *Denticles* - Well struck all around.
Identifying Marks - Only slightly off center. Bottoms of SSAY and tops of RE weakly struck. No other significant marks or damages visible.

Chapman, Nygren Collection (29 April 1924) 21; present whereabouts unknown.

31 (EF)

Obv.: *Centering* - 225°. *Denticles* - Weak or missing 75° to 255°. *Inner Ring* - Well struck all round.
Identifying Marks - Rim nicks at 225° (below G in GOLD) and 300° (above l. upper serif of E). Top of A not fully struck up.

Rev.: *Centering* - 337.5°. *Denticles* - None visible in reproduction.
Identifying Marks - Rim nick at 300° (above T). Top of T and bottoms of AS weakly struck. Centering worst seen, a diagnostic for this coin.

Merkin (20 September 1967) 460; Merkin (26 September 1970) 589; present whereabouts unknown.

32 (AU)

Obv.: *Centering* - 180°. *Denticles* - 87; slightly weak 195° to 240°. *Inner Ring* - Well struck all around; slight flattening at 300° to 345° (above EO).
Identifying Marks - Nicks across l. center of curve of second G and across center of upright of I in GEORGIA. Drill point dot near top of upright of R. No other significant marks or damages visible.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: *Centering* - 270°. *Denticles* - Visible only 120° to 150°.
Identifying Marks - Lower horizontal stroke of E in REID not fully struck up. Nick across upper r. curve of D. There appears to be small edge cut at 270°.

The "Redbook" coin; present whereabouts unknown.

33 (VF)

Obv.: *Centering* - 210°. *Denticles* - Weak 30° to 240°. *Inner Ring* - weak or missing 45° to 135°; traces visible at 75° and 112.5°. *Identifying Marks* - All letters and numbers well struck. No major damages visible.

Rev.: *Centering* - 315°. *Denticles* - None visible in reproduction.
Identifying Marks - Diagonal gouge in field below second S in ASSAYER. Nick through l. curve of 0 in $2.50. Small edge nick at 135°. Bottoms of SAYE appear weakly struck. Edge ding over E in REID (at 15° to 30°).

Kosoff, Shuford Collection (14 May 1968) 2556; present whereabouts unknown.

34 (AU)

Obv.: *Centering* - 135°. *Denticles* - 87; slights weak 120° to 165°. *Inner Ring* - Well struck all around; slightly flattened toward inside between 300° and 330°.
Identifying Marks - Nick in field below l. side of upright of R; another between OL; another diagonally up to r. across r. center of 8 and two in field just below 8; another across center of l. curve of 0 in date. Mint luster and die finishing marks around letters. Drill point dot near top of upright of R.

Rev.: *Centering* - 300°. *Denticles* - Visible only 90° to 180°.
Identifying Marks - Tiny edge nick at 262.5° near l. foot of l. stand of first A in ASSAYER. Two tiny nicks in field just below l. pendant of T; another across l. lower tip of 2; another across lower r. loop of R in REID; another in field halfway between up-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

right of E in ASSAYER and 5. Mint luster and die finishing marks around letters. Drill point dot near top of upright of R in ASSAYER.

In 1975 the following measurements were recorded, after examination of coin: 3.90 g; 18.63 specific gravity; 17.8 mm diameter; 1.1 mm thickness.

Peters 66, ANA Convention (24 August 1973) 940; J. Klausen; private collection.

35 (EF)

Obv.: *Centering* - 150°. *Denticles* - 87; well struck all around. *Inner Ring* - Well struck all around; flattened and damaged 337.5° to 37.5°.

Identifying Marks - Tiny nick across middle of l. curve of second G in GEORGIA; another in field below and to r. of G in GOLD (at 210°). Lower half of 1 in date not fully struck up.

Rev.: *Centering* - Cent'd. *Denticles* - Missing 195° to 330°.

Identifying Marks - Nick across upright of T just under crossbar. Pit in field above fork of Y (at 165°). All letters well struck. Drill point dot near top of upright of R in ASSAYER.

Illustrated in Raymond, p. 25 and later editions; present whereabouts unknown.

36 (EF)

Obv.: *Centering* - 165°. *Denticles* - 87; well struck all around. *Inner Ring* - Weak 330° to 15° and 180° to 195°.

Identifying Marks - All letters and numbers well struck; no significant marks or damages visible in reproduction.

Rev.: *Centering* - 300°. *Denticles* - Visible 75° to 195°.

Identifying Marks - Tops of T, RE somewhat weakly struck. Drill point dot near top of upright of R in ASSAYER. No other significant marks or damages.

Chapman, Nygren Collection (29 April 1924) 20; present whereabouts unknown.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

37 (EF)

Obv.: *Centering* - 210°. *Denticles* - Visible 225° to 360°; traces visible 105° and 150°. *Inner Ring* - Sharp all around.
Identifying Marks - All devices well struck. No major damages or marks visible.

Rev.: *Centering* - 315°. *Denticles* - None visible.
Identifying Marks - Top of T and bottom of first A in ASSAYER somewhat weakly struck. No other significant marks or damages visible.

Kelly, ANA Convention (24 August 1956) 1824; present whereabouts unknown.

38 (EF)

Obv.: *Centering* - Cent'd. *Denticles* - Appear to be well struck all around. *Inner Ring* - Well struck all around; small nick over O of GEORGIA (at 345°).
Identifying Marks - All letters and numbers appear well struck. No major damages or marks visible.

Rev.: *Centering* - Cent'd. *Denticles* - None visible.
Identifying Marks - Vertical nick in field halfway between 5 and E of ASSAYER. Two horizontal nicks in field between upper halves of 2 and 5.

Kreisberg-Schulman (17 February 1961) 918; Kreisberg-Cohen (29 June 1970) 2004; present whereabouts unknown.

39 (VF)

Obv.: *Centering* - 225°. *Denticles* - Weak 330° to 30°.
Inner Ring - Weak 330° to 30°.
Identifying Marks - Tops of ORG somewhat weakly struck. Tiny dimple in field on 202.5° radius between bottoms of G and O in GOLD. Another just r. of confluence of upper and lower curves of 3 in date.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: *Centering* - Cent'd. *Denticles* - Faint 135° to 330°, balance not visible.

Identifying Marks - Tops of R and E in REID somewhat weakly struck. Vertical stroke of R in REID marred by a long depression suggestive of incomplete filling of die. Drill point dot near top of upright of R in ASSAYER. Distinct edge nicks at 172.5° and 202.5°. Another nick in field on 225° radius just above upper serif of first S in ASSAYER.

Elder, Wilson Collection (7 October 1908) 1174; present whereabouts unknown.

APPENDIX 1

SALES OF REID COINS WITH UNAMBIGUOUS ILLUSTRATIONS

$2.50

Elder, Wilson Collection (7 October 1908) 1174
Chapman, Zabriskie Collection (4 June 1909) 437
Mehl 35, B. W. Smith Collection (25 May 1915) 404
Chapman, Charles Gregory Collection (22 June 1916) 2283
Mehl 50, Sears Collection (29 October 1918) 65
Mehl 55, New Orleans Collection (19 November 1919) 810
Chapman, Nygren Collection (29 April 1924) 20, 21, 22
Mehl 71, Slack Collection (5 May 1925) 71
Morgenthau (18 October 1933) 236
Numismatic Gallery, Lawson Collection (26 August 1947) 462
Kelly, ANA Convention (24 August 1956) 1824
Kreisberg-Schulman (17 February 1961) 918
Stack's, George O. Walton Collection (4 October 1963) 2179
Stack's, Bolt Collection (22 April 1966) 1124
Merkin (20 September 1967) 460
Kosoff, Shuford Collection (14 May 1968) 2556
Kreisberg-Cohen (29 June 1970) 2004

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Merkin (26 September 1970) 589
Peters 66, ANA Convention (24 August 1973) 940
Kreisberg-Cohen (12 September 1973) 1366
Stack's, Gibson Collection (11 November 1974) 153
American Auction Assoc., Herstal Collection (8 February 1974) 803
Kreisberg-Cohen, Beck Collection 2 (13 February 1976) 606

$5.00

Chapman, Nygren Collection (29 April 1924) 19
Morgenthau (18 October 1933) 237
H. M. F. Schulman F. P. L. 26 (1946), pp. 14-15
Kosoff, Melish Collection (28 April 1956) 2339
Vinchon, Tourres Collection (28 March 1968) 263

$10.00 DATED

Numismatic Gallery (2 March 1948) 940
Kreisberg-Schulman (7 April 1967) 601
Kreisberg-Cohen, Moskovitz Collection (16 February 1977) 1485

$10.00 UNDATED

Kreisberg-Schulman, Ball Collection (21 May 1966) 1514

APPENDIX 2

SALES OF REID COINS WITHOUT ILLUSTRATIONS OR WITH AMBIGUOUS ILLUSTRATIONS

$2.50

Chapman, King Collection (5 April 1892) 689
Elder (17 December 1908) 526a
Elder (23 June 1914) 244
Chapman (28 June 1917) 353
Elder (11 June 1925) 1493
Morgenthau (14 January 1933) 579
Kosoff (6 August 1940) 746

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Stack's, J. F. Bell Collection (9 December 1944) 1051
Stack's, Hall Collection (19 May 1945) 2349
Stack's, Wharton Collection (27 October 1945) 2520
Stack's, San Francisco Collection (18 May 1946) 1157
Numismatic Gallery, ANA Convention (20 August 1946) 1157
Numismatic Gallery F.P.L. (Fall 1946) [n.p.]
Stack's, Deetz Collection (16 November 1946) 2023
Stack's F.P.L. 37 (January 1947), p. 12
Stack's, Lee Collection (4 October 1947) 1908
Stack's F.P.L. 43 (Fall 1948), p. 4
Numismatic Gallery Monthly, vol. 2, no. 2 (February 1949), p. 4
Numismatic Gallery Monthly, vol. 4, no. 1 (January 1951), p. 2
Numismatic Gallery, ANA Convention (24 August 1953) 1411
Kosoff's Coin Bulletin F.P.L. 5 (March 1955), p. 53
Kreisberg-Schulman (18 January 1963) 1590
Stack's F.P.L. (November 1967) [n.p.]
Stack's F.P.L. (June 1968) [n.p.]
Kreisberg-Cohen F.P.L., *Num* (April 1971), p. 553 and (April 1972), p. 279
Klausen F.P.L., *Num* (January 1975), p. 189

$5.00

L. Low (16 July 1903) 1107
Numismatic Gallery F.P.L. (1945), p. 10
Numismatic Gallery Monthly, vol. 2, no. 10 (October 1949), p. 2
Numismatic Gallery Monthly, vol. 4, no. 1 (January 1951), p. 2

$10.00 DATED

Numismatic Gallery Monthly, vol. 4, no. 1 (January 1951), p. 2

$10.00 UNDATED

None

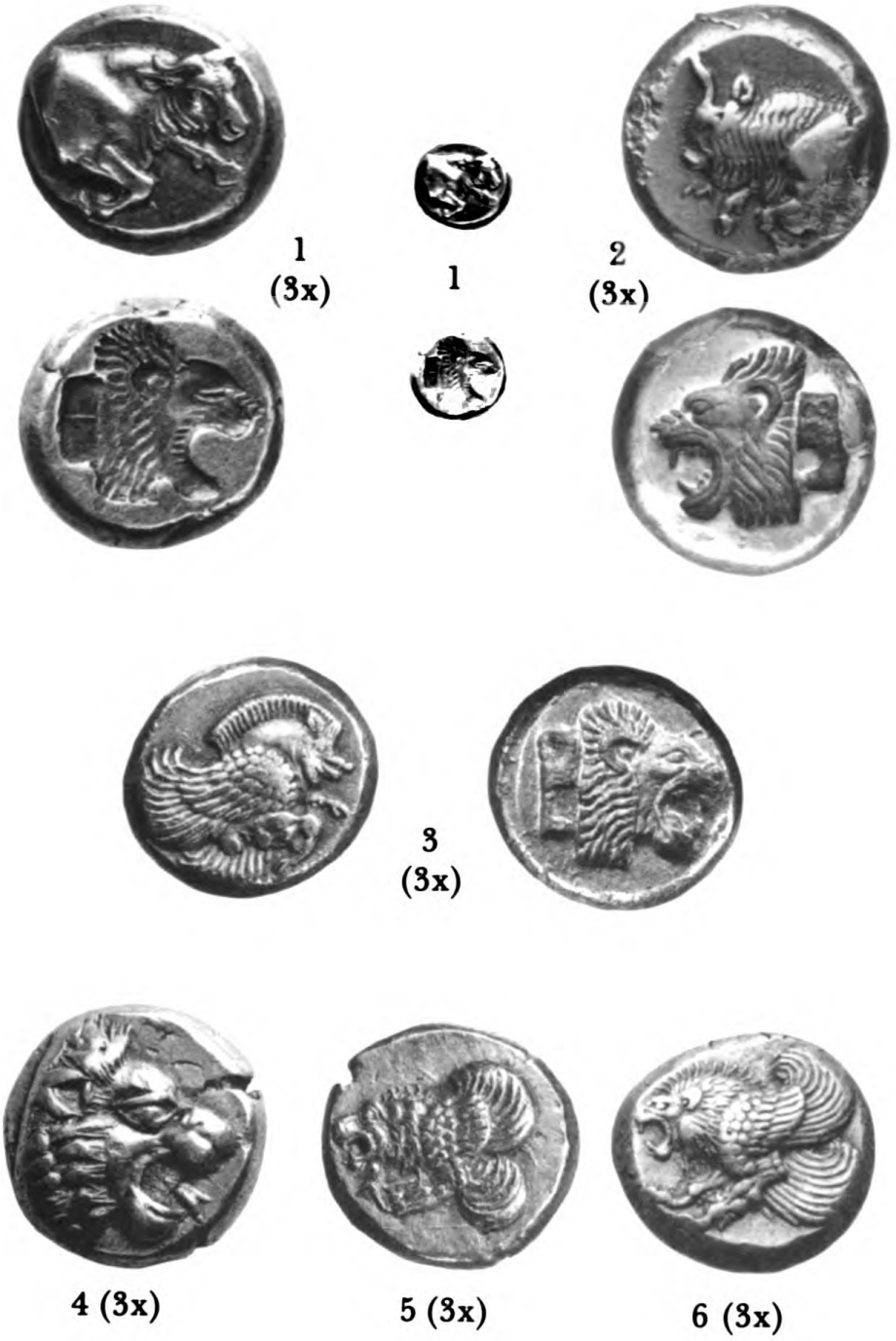
Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

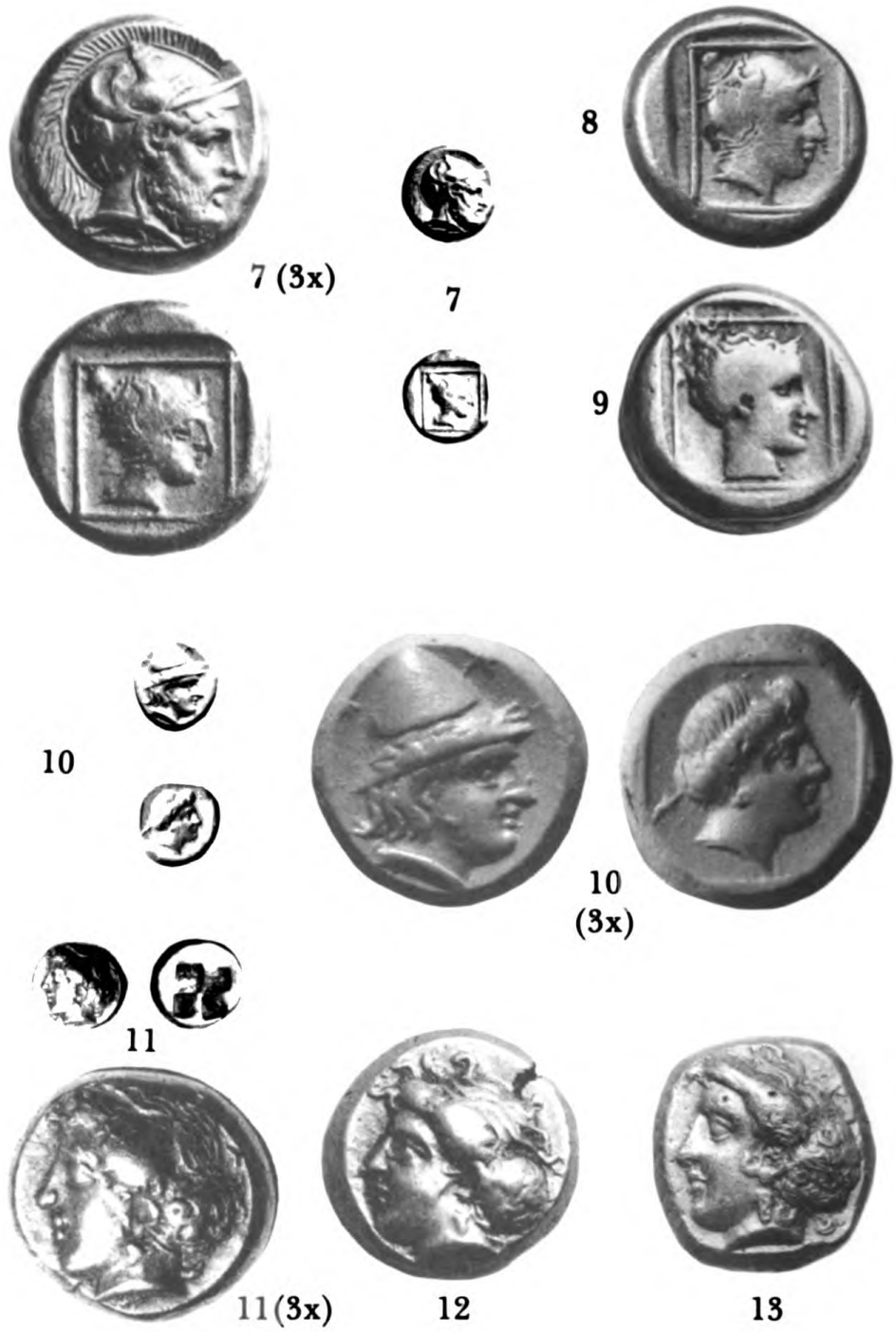
Digitized by Google

Original from
UNIVERSITY OF MICHIGAN



Early Electrum of Mytilene and Phocaea

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Early Electrum of Mytilene and Phocaea

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



1 2 A

3 4 5

6 7 (2x) 7

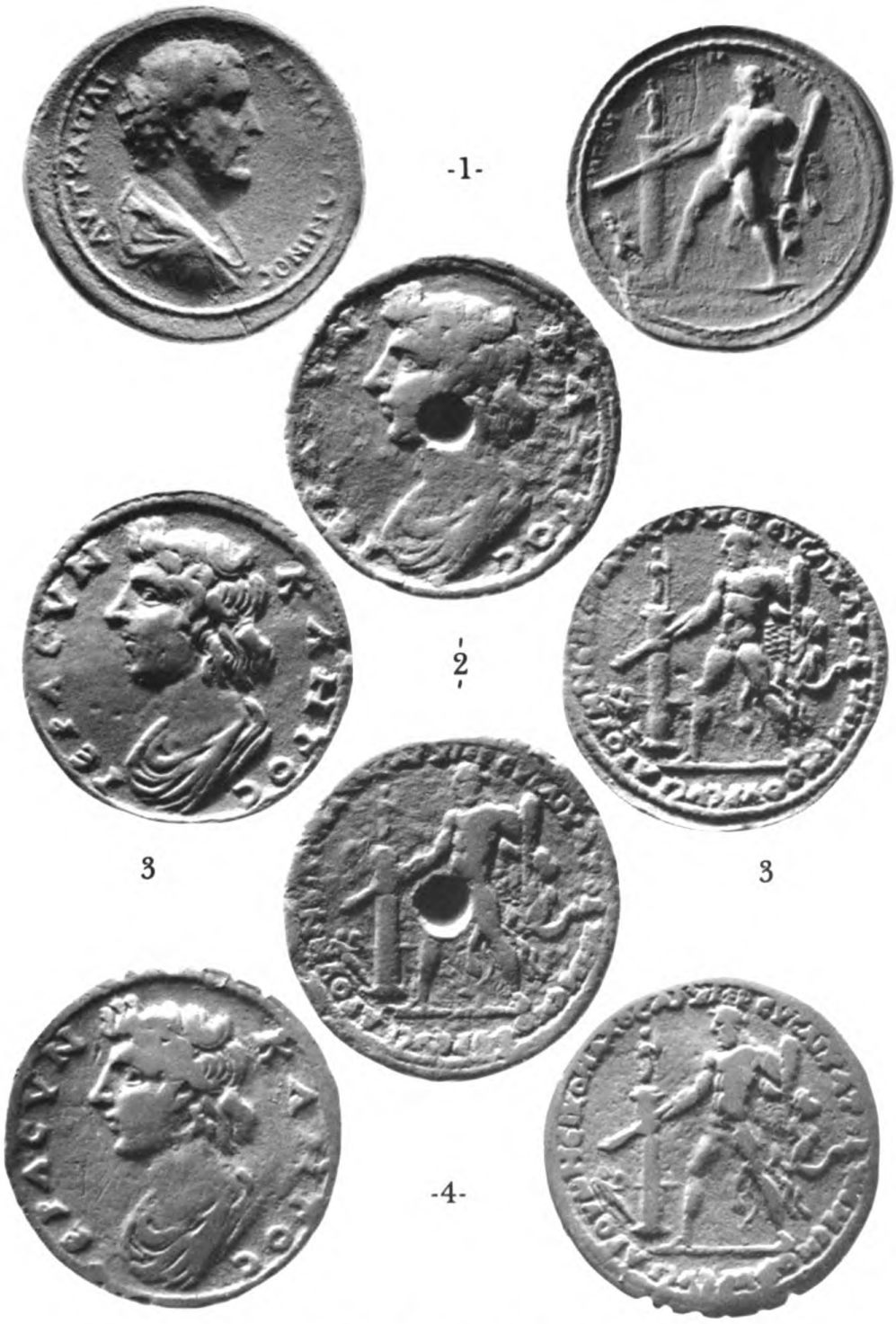
Greek Accessions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Greek Accessions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



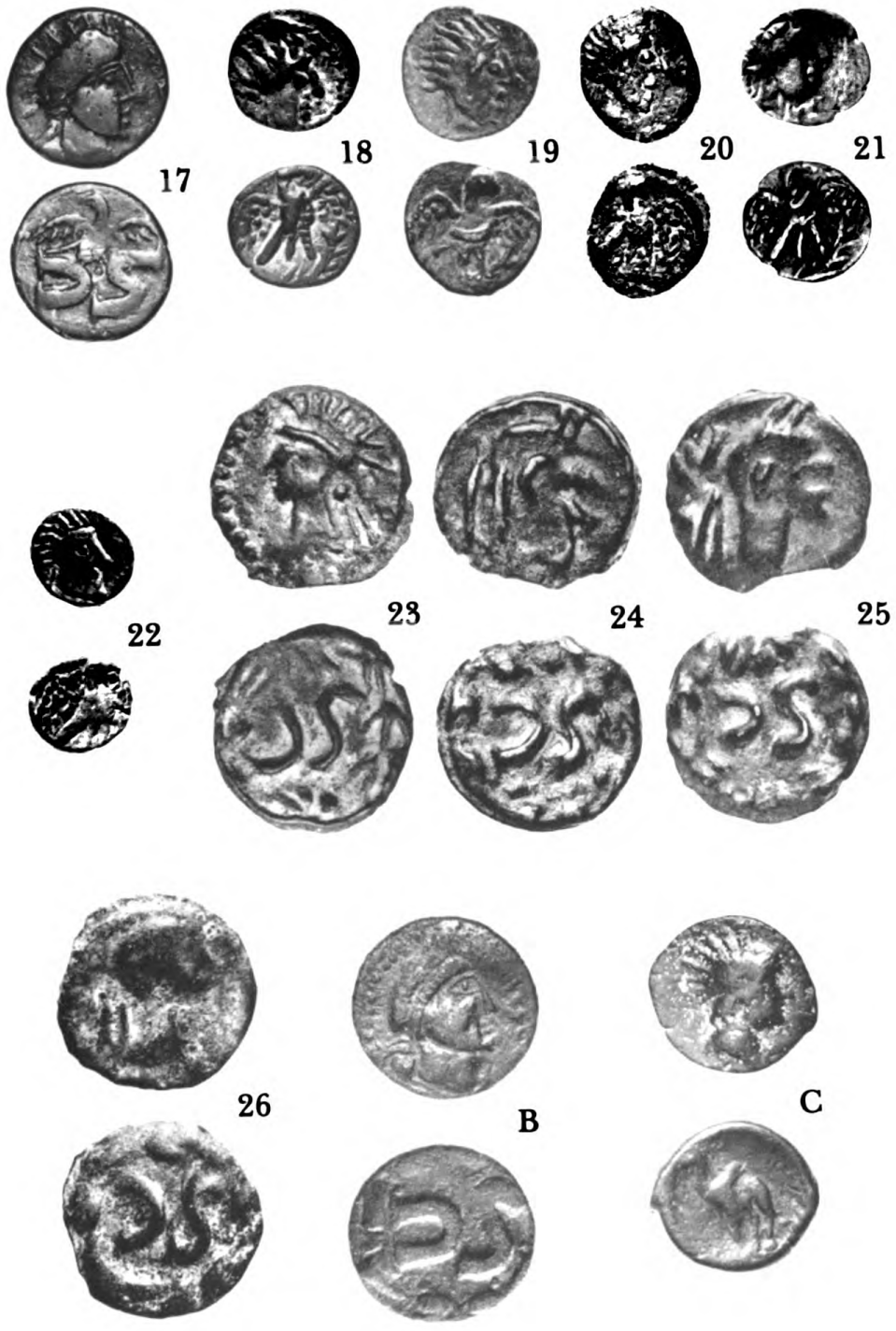
Pautalian Medallion

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



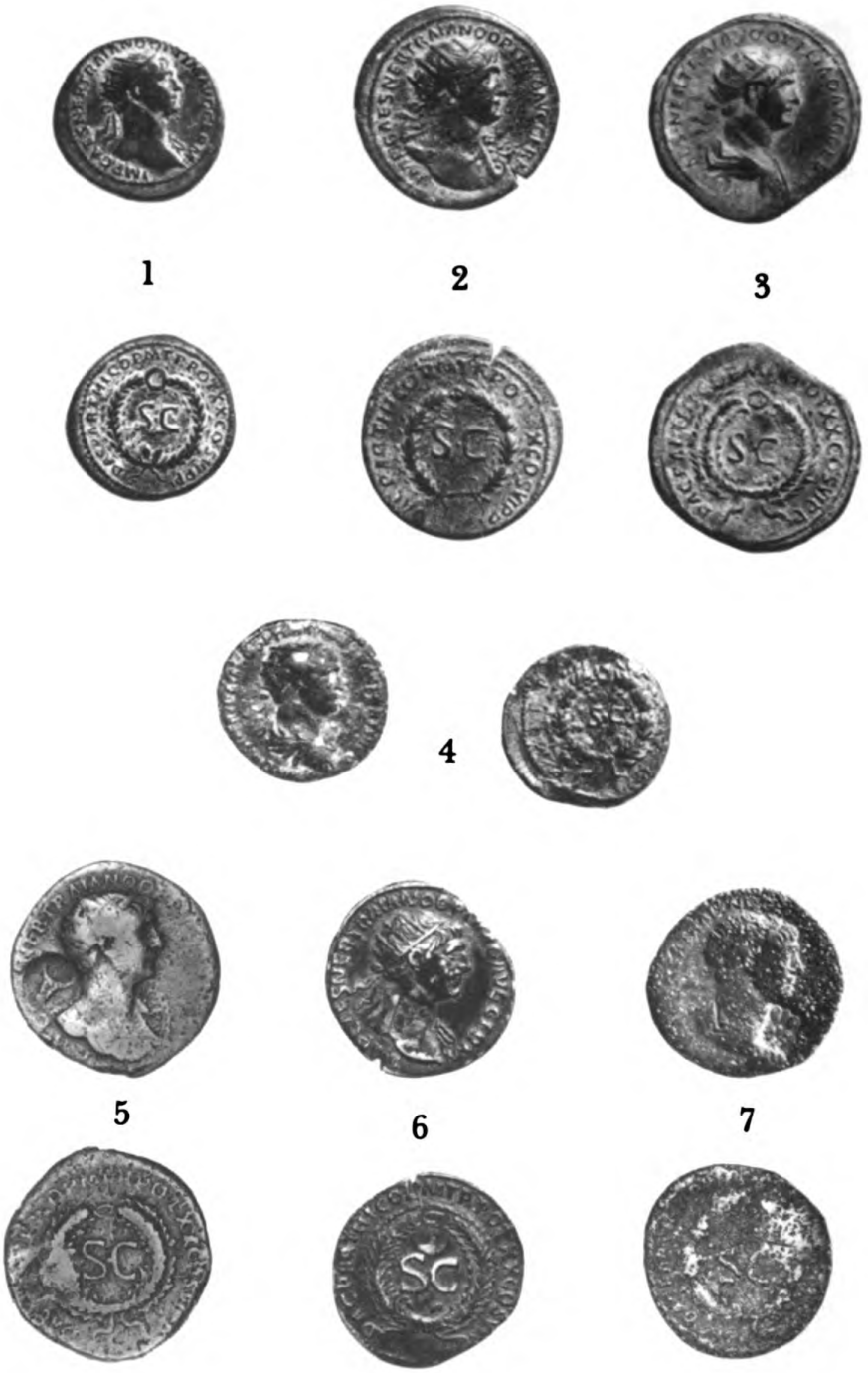
Coins of Hatra

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Coins of Hatra

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



1 2 3

4

5 6 7

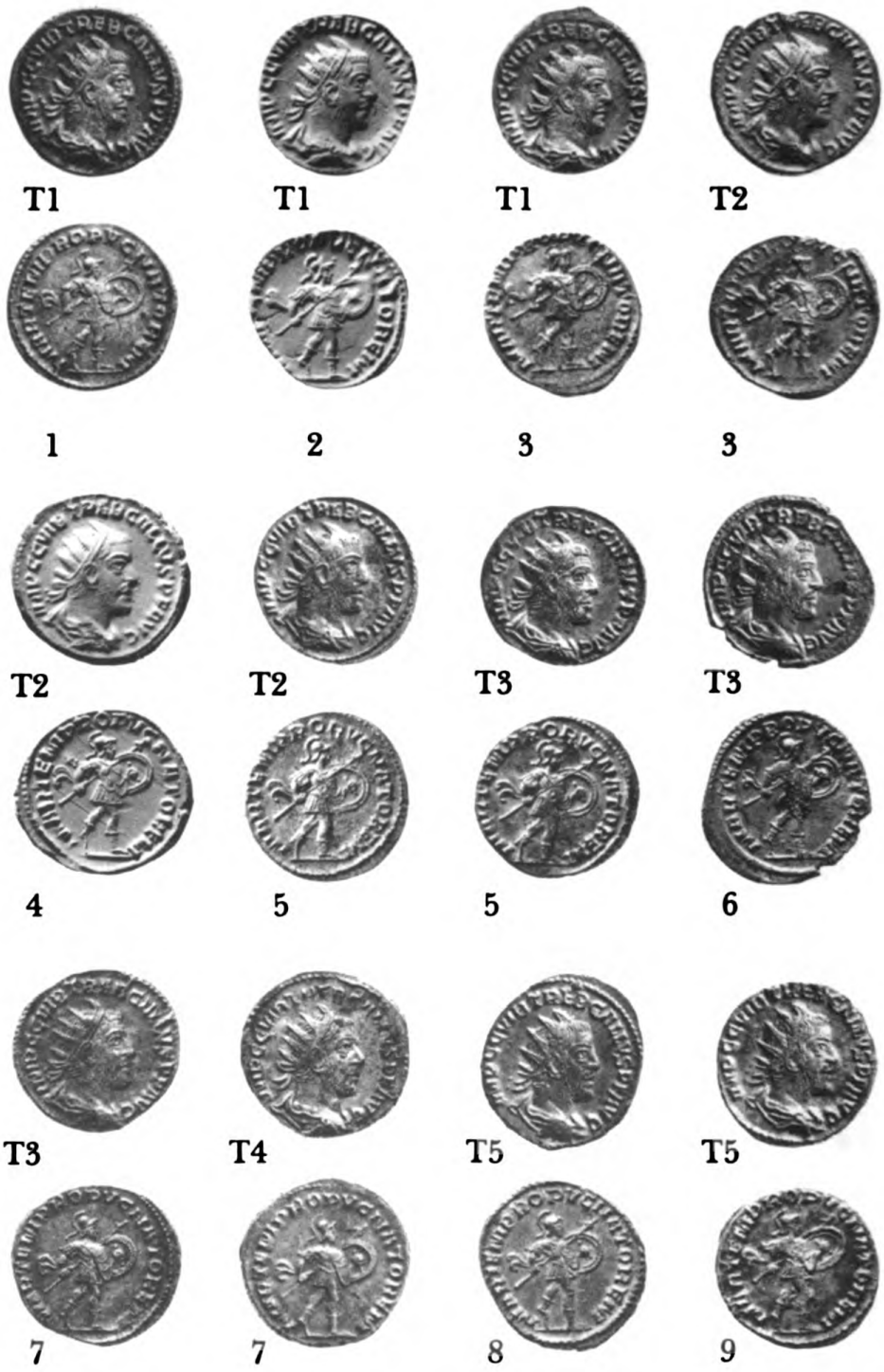
Latin AES from Antioch

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Latin AES from Antioch

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



T1 T1 T1 T2

1 2 3 3

T2 T2 T3 T3

4 5 5 6

T3 T4 T5 T5

7 7 8 9

Antioch Hoard—1

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Antioch Hoard—2

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0


T12


T12


T12


T13


17


18


19


19


T14


V1


T15


T15


20


20


21


22


T16


T17


T17


T18


23


24


25


25

Antioch Hoard—3

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



T19



T19



T20



T21



26



27



28



28



V2



T22



T22



T23



29



29



30



31



T24



T25



V3



32



33



34

Antioch Hoard—4

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



T26



T27



T28



T29



35



36



37



38



T30



T31



T32



T33



39



40



41



42



T34



T35



T35



43



44



45

Antioch Hoard—5

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



T7 T36 T36 T37

46 47 48 48

T38 T37 T39 T40

48 49 50 51

T41 T38 T37

52 53 53

Antioch Hoard—6

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0


T42


T43


T43


T44


53


53


54


55


T44


T42


T38


T42


56


57


57


58


T45


V4

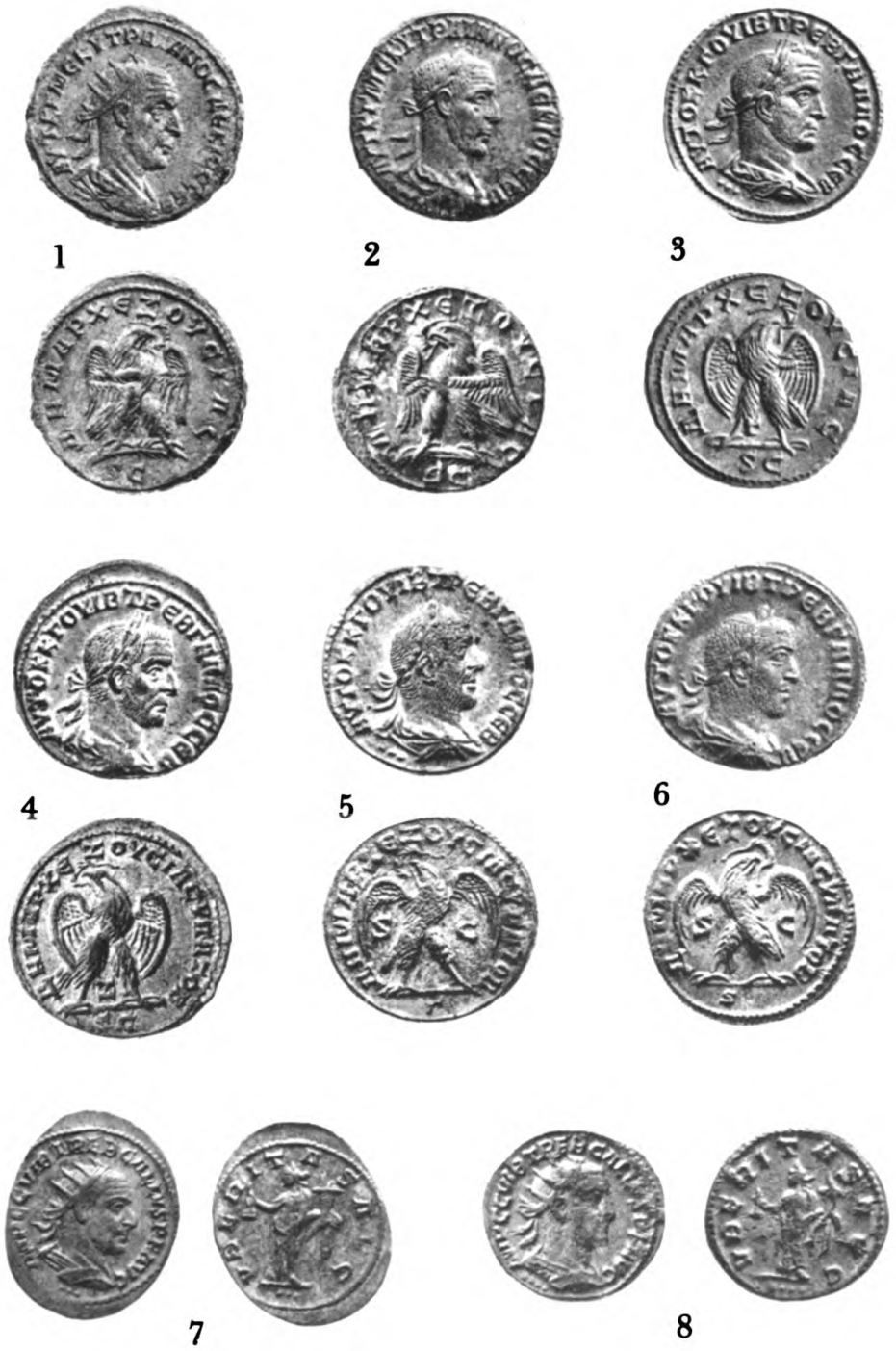

T46


59


60


61

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Antioch Hoard—8

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



9 10 11

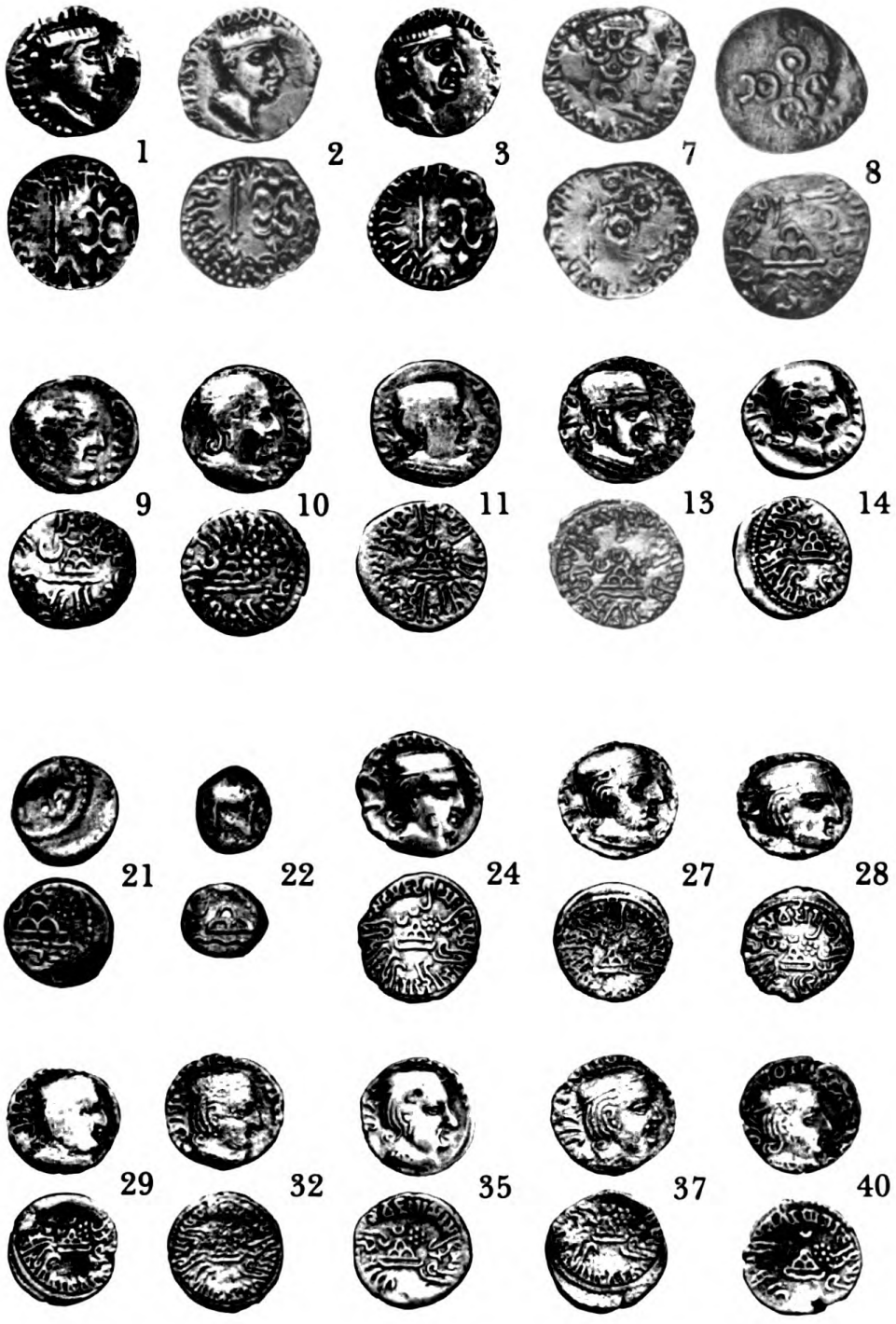
12



13 14 15 16

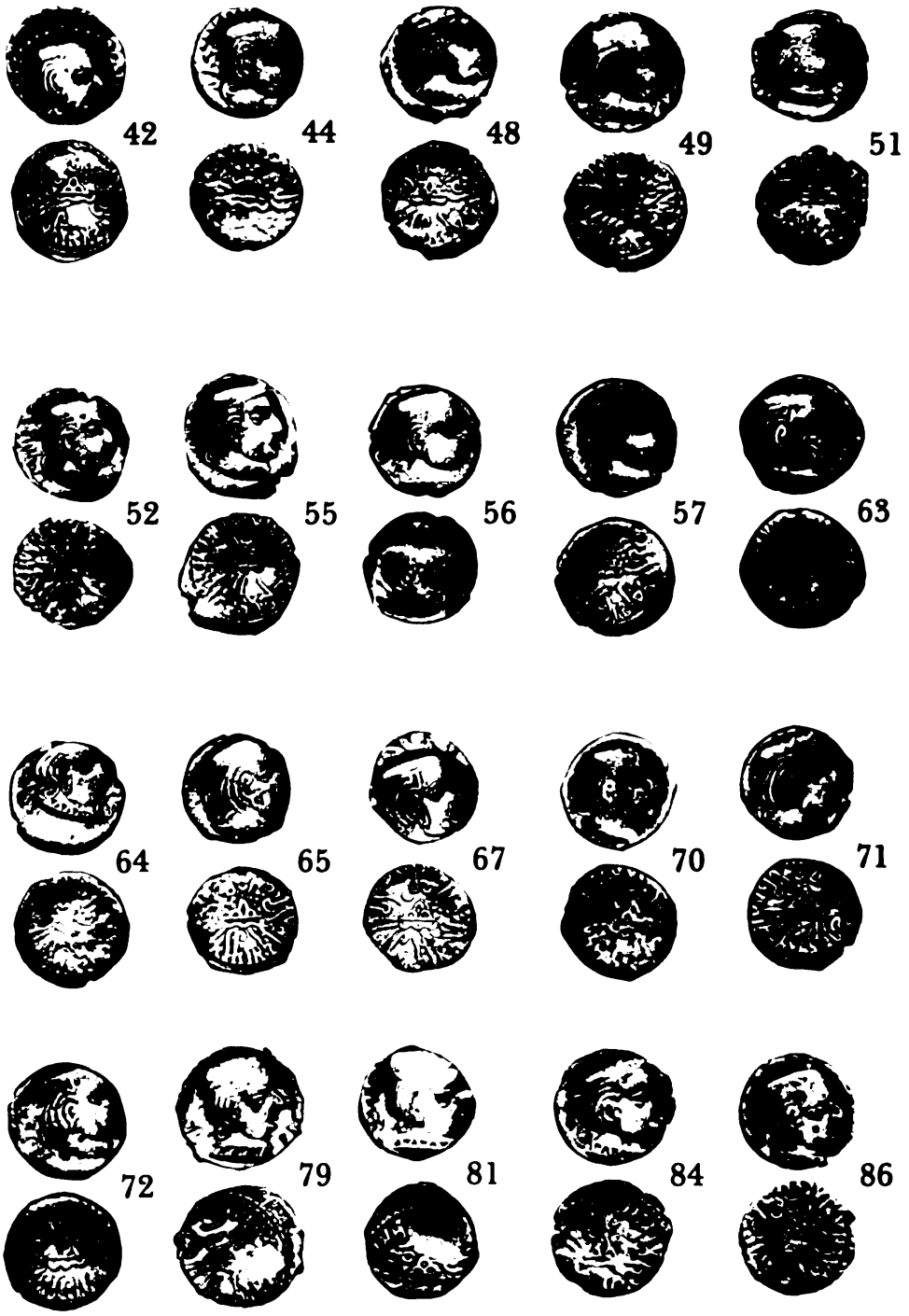
Antioch Hoard—9

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



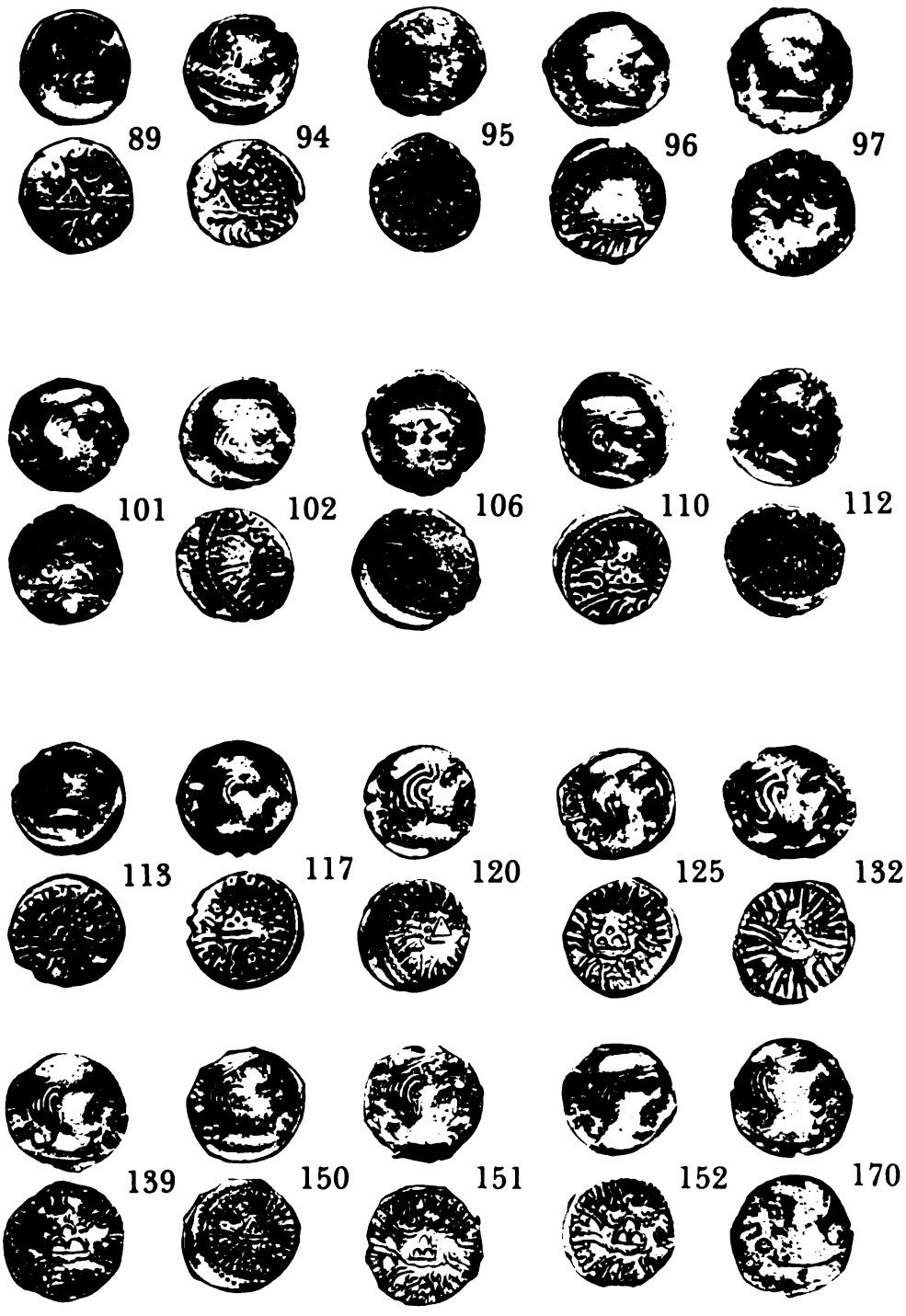
Kṣatrapa Coins

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Kṣatrapa Coins

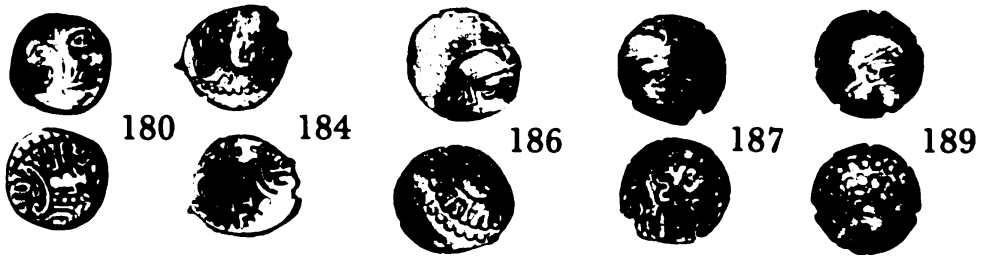
Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

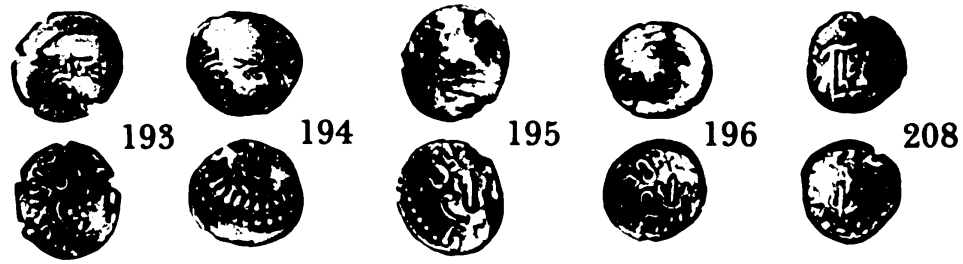


Kṣatrapa Coins

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0







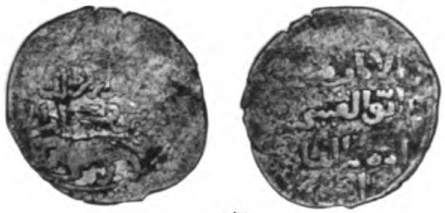


Kṣatrapa Coins

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



44



47



49



58m



64



65p



66a



67



68



102m

Coinage of Baybars I

Digitized by Google

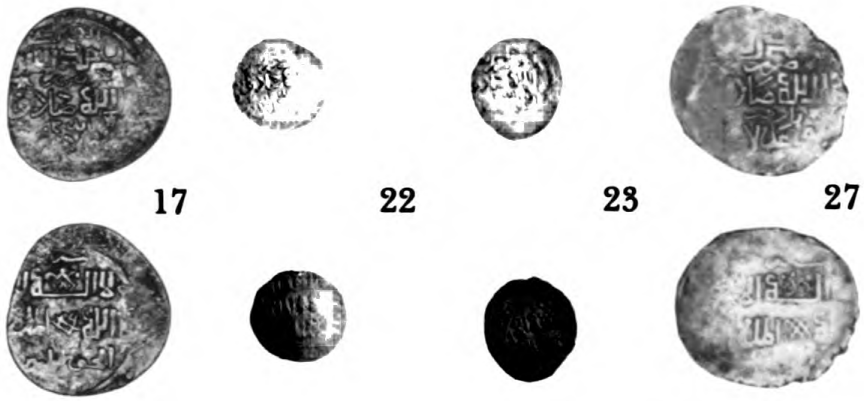
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Coinage of Nūr-Āward

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



17 22 23 27



28 29 30





31 32 A



Coinage of Nūr-Āward

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



1



2





3

Wright's Medal of Washington

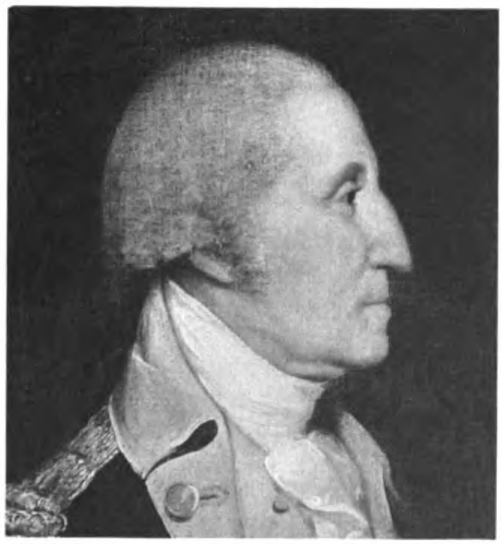
Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



4



5

Wright's Medal of Washington

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



6



7



8



9

Wright's Medal of Washington

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

C-17
740

THE AMERICAN NUMISMATIC SOCIETY

MUSEUM NOTES

23

THE AMERICAN NUMISMATIC SOCIETY
NEW YORK
1978

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

THE AMERICAN NUMISMATIC SOCIETY

Founded 1858 - Incorporated 1865

Broadway Between 155th & 156th Streets
New York, N.Y. 10032

PURPOSES: The Society was founded for the collection and preservation of coins, medals, decorations and paper money and for the investigation of their history and other subjects connected therewith.

MEMBERSHIP: Applications for membership are welcomed from all interested in numismatics. Inquiries regarding membership should be addressed to the Secretary of the Society.

DUES: The annual dues for an Associate Membership are $15.00. Issues of the *Notes and Monographs*, *Museum Notes* and *Numismatic Literature* are distributed to all members.

PUBLICATIONS: The American Numismatic Society Museum Notes is a scholarly journal containing articles on numismatic topics. The *Numismatic Notes and Monographs* consist of separately issued publications, each on a single topic. *Numismatic Studies* is a series accommodating works in a larger format. *Numismatic Literature*, published twice each year, is an international abstract bibliography of the current literature in the profession. The Society is also engaged in the systematic publication of its entire Greek coin collection in *Sylloge Nummorum Graecorum: American Numismatic Society.*

MUSEUM: The Society maintains a museum located in uptown Manhattan, New York City, which houses its offices, collections and library. Collections embrace coins of all periods from their inception to modern times, medals and decorations. Selections from its cabinets are on display in an exhibition. The library, consisting of about 25,000 volumes, covers all branches of numismatics.

The museum is open to Members and the public from 9 A.M. to 4:30 P.M. on Tuesdays, Wednesdays, Thursdays, Fridays and Saturdays. In addition, the public exhibition is open on Sundays from 1 to 4 P.M. The museum is closed on Mondays and the following holidays: New Year's Day, Lincoln's Birthday, Independence Day, Election Day, Thanksgiving Day, the fourth Friday in November, the fourth Saturday in November, December 24, Christmas Day. The public exhibition is open to the public from 9 A.M. to 4:30 P.M. on the fourth Friday and the fourth Saturday of November.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

FEB 5 1979

University of Michigan Periodical Reading Room

THE AMERICAN NUMISMATIC SOCIETY

MUSEUM NOTES

23

THE AMERICAN NUMISMATIC SOCIETY
NEW YORK
1978

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

© Copyright 1978
The American Numismatic Society

ISSN 0145-1413
ISBN 0-89722-173-7

PRINTED IN BELGIUM AT CULTURA, WETTEREN

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CONTENTS

GREEK

HYLA A. TROXELL and NANCY M. WAGGONER. The Robert F. Kelley Bequest 1

ORESTES H. ZERVOS. A Ptolemaic Hoard of "Athena" Tetradrachms at ANS 43

ARTHUR HOUGHTON. The Seleucid Mint at Lampsacus 59

OTTO MØRKHOLM. The Era of the Pamphylian Alexanders 69

FRED S. KLEINER. Hoard Evidence and the Late Cistophori of Pergamum 77

ROMAN AND BYZANTINE

MARGRET S. POND ROTHMAN. Posthumous Hadrianic Medallions 107

WILLIAM E. METCALF and PAUL MUNRO WALKER. The Antioch Hoard: A Supplement 129

MEDIAEVAL

J. D. BRADY. A Firm Attribution of Latin Gold Coinage to Twelfth-Century Jerusalem 133

PAUL Z. BEDOUKIAN. A Hoard of Bilingual Trams of Ḥetoum I of Cilician Armenia 149

ORIENTAL

CARL WURTZEL. The Coinage of the Revolutionaries in the Late Umayyad Period 161

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

MODERN

NICHOLAS ADAMS. New Information About the Screw Press as a Device for Minting Coins: Bramante, Cellini and Baldassare Peruzzi 201
J. D. BRADY. The Essai Quarter-Florin of Brabant, 1600 207
J. D. BRADY. Two Additions to the Works of Karl Goetz 211

ANS STYLE SHEET

Guide to Contributors and List of Abbreviations 213

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

THE ROBERT F. KELLEY BEQUEST

(PLATES 1–6)

HYLA A. TROXELL
NANCY M. WAGGONER

The Robert F. Kelley bequest to the American Numismatic Society has already received substantial publicity through several news media. Mr. Kelley's career as a United States diplomatic officer covered many years of outstanding foreign service, first and foremost in the field of Soviet Affairs; but his hobby as an active collector of ancient Greek and Byzantine coins coincided with his assignment to the American Embassy in Ankara, Turkey, during the 1940s—years ripe for the formation of a choice ancient coin collection. It was there in Asia Minor that his area of concentration lay.

It seems only fitting to publish as quickly as possible the most significant specimens among the more than 900 Greek coins once in Mr. Kelley's possession. As the reader will soon discover, superb condition was not an overriding factor in his selection of all coins discussed below; but for this there are compensating factors.[1]

ELECTRUM AND GOLD

UNCERTAIN ASIA MINOR

1. *Obv.*: Convex surface without discernible pattern.
   Rev.: Two square punches, side by side, one deeper than the other.
   EL Hecte 2.33

[1] The research on the electrum and gold (nos. 1–17) and on the Seleucid silver coinage (nos. 44–53) was done by Margaret Thompson. The remaining silver has been divided between Hyla Troxell (nos. 18–28, 41) and Nancy Waggoner (nos. 29–40, 42–43).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

2. *Obv.*: Smooth surface with raised lines: ⊢.
   Rev.: Deep punch of roughly circular shape.
   EL Hecte 2.44

3. *Obv.*: Fulmen.
   Rev.: Square incuse.
   EL Twenty-fourth 0.62

4. *Obv.*: Helmeted head l.
   Rev.: Square incuse.
   EL Twenty-fourth 0.67

5. *Obv.*: Head of stag r.
   Rev.: Square incuse diagonally divided.
   EL Forty-eighth 0.30

Nos. 1 and 2, typeless dumps with punched reverses, belong to the earliest stages of coinage. The closest parallel for the first piece is a hecte in the Boston Museum of Fine Arts (Brett 1750). Other examples of the class in different denominations include a Boston trite (Brett 1749) and two small fractions from the Artemision deposit.[2] In weight and incuse punch pattern our coin is comparable to Lydian sixths of the "Alyattes" type.

The unusual linear marking on the obverse of no. 2 is apparently otherwise unknown for early electrum, but a strikingly similar pattern appears on one side of a silver dump from a Late Minoan context at Cnossus.[3] Evans explains the lines as the result of dropping metal on a marked surface and Robinson, in discussing the Artemision material, postulates that the earliest electrum pieces were made by pouring molten metal on a rough surface where it was allowed to cool. A flat slab scored by shallow channels at right angles would have produced the raised lines found on our coin and on the Cnossus dump.

Had it not been for a trite in an old sales catalogue,[4] it would have been difficult to identify the obverse type of no. 3. The "fulmine di stile assai rozzo" is far clearer on the larger coin, but the device of our

[2] E. S. G. Robinson, "Coins from the Ephesian Artemision Reconsidered," *JHS 71* (1951), p. 166, nos. 2–3.

[3] A. J. Evans, "Minoan Weights and Currency," *CorNum*, pp. 363–64.

[4] Ratto, 26 Apr. 1909, 3794.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

small fraction is undoubtedly the same. These two pieces, of Milesian weight standard, seem to be the only surviving specimens of the issue.

No. 4 is a variant. A helmeted head of similar archaic style faces right on another Phocaic twenty-fourth from the Weber Collection (5732); a twelfth in the von Aulock *Sylloge* (7783) has the same orientation as our fraction.

Although included with coins of uncertain origin, no. 5 is almost certainly from the mint of Ephesus. Comparable sixths and twelfths, showing the forepart of a stag and also struck to the Milesian standard, are well attested, but this seems to be a unique example of the forty-eighth on which only the head of the animal appears. Even though already illustrated,[5] the coin merits reproduction here as a record of its present whereabouts.

PHOCAEA (?)

6. *Obv.*: Bull walking l. on ground line; all on disk or shield.
   Rev.: Two square incuses, one considerably smaller than the other, applied independently.
   EL Stater 16.50

This is one of the most interesting coins of the Kelley bequest, adding as it does still another type to an intriguing group of early electrum staters discussed most recently by E.S.G. Robinson.[6]

The obverses of the five issues known to Robinson have little in common:

Seal swimming r. with Θ below.
Chimaera standing l.
Lioness, head reverted, standing r.
Cock standing r., holding the head of a tunny in its beak.
Tunny with fillet.[7]

[5] Münzen und Medaillen FPL 233, June 1963, 9.

[6] E. S. G. Robinson, "Some Electrum and Gold Greek Coins," *ANSCent*, pp. 588–89.

[7] Three of the staters are in London (tunny, chimaera, and one seal). Another seal is in Munich. The cock was formerly in the Löbbecke Collection and is presumably now in the Berlin Cabinet. The lioness was sold in the Bank Leu-Münzen und Medaillen auction of 28 May 1974, 1.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The reverses, however, are linked by a distinctive pattern of two incuses of markedly disparate size, and all coins are struck to the Phocaic standard. As Robinson says, these strikings must be close chronologically and geographically. Cyzicus is the obvious source of the staters with tunny and fillet and cock holding the head of a tunny; the swimming seal is generally assigned to Phocaea. To the latter mint Robinson would also attribute the chimaera and lioness staters with their heraldic types "which were probably personal badges."

The new Kelley coin clearly belongs to this group of early staters, its heraldic character emphasized by the shield or disk which supports the type. Association with the seal of Phocaea is especially close. Although large and small punches appear on all coins, their relative placement differs. On the cock, tunny and lioness staters, the small incuse is neatly centered beside the large one (◪). The small square of the chimaera extends slightly beyond the large punch (◪), while on the seal and bull it forms an appendage at one corner (◪).

Specific gravity readings are recorded for three of the previously published staters:[8] tunny, 14.32 = 59 percent gold; chimaera, 13.67 = 51 percent gold; seal, 13.7 = 51 percent gold. The reading for the bull stater is 13.65 = 51 percent gold.[9] In weight, too, the relationship between bull and seal is apparent. Two examples of the latter issue are known; each weighs 16.50 grams, precisely the reading for our bull. The other four staters are lighter.[10]

As a number of scholars have noted, the scarcity of surviving Phocaic staters is puzzling in the light of frequent references in the ancient sources. It is gratifying, therefore, to find new material turning up.

[8] The determinations for the chimaera and tunny staters are given in B. V. Head, "Electrum Coins and Their Specific Gravity," *NC* 1887, p. 307; that for the British Museum seal in *HN*, p. 588.

[9] I am indebted to my colleague, Michael Bates, for this reading. Here, too, I should like to express my gratitude to Silvia Hurter for reminding me of a highly pertinent reference.

[10] The lioness weighs 16.43, the chimaera 16.35, the tunny 16.32 and the cock 16.22.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CYZICUS

7. *Obv.*: Two tunnies l., one over the other.
   Rev.: Square incuse.
   EL Twelfth 1.32

8. *Obv.*: Goat walking l. on tunny.
   Rev.: Quadripartite incuse.
   EL Hecte 2.68

9. *Obv.*: Head of Athena l., wearing Corinthian helmet; to r., tunny.
   Rev.: Quadripartite incuse.
   EL Twelfth 1.33

10. *Obv.*: Female head r., wearing *sakkos* with band decorated in zigzag pattern; below, tunny.
    Rev.: Quadripartite incuse.
    EL Hecte 2.69

11. *Obv.*: Nike l., kneeling on tunny and holding aphlaston (off flan).
    Rev.: Quadripartite incuse.
    EL Twenty-fourth 0.68

More than a third of Kelley's electrum consists of issues of Cyzicus: 8 staters and 32 fractions. For the most part the coins, often in superb condition, are examples of published types and denominations. The few pieces selected for presentation here are of special significance as additions to the existing record.[11]

The only new type is that of no. 8. Staters and sixths with either a goat's head or a recumbent goat are listed by von Fritze (48, 92) but the walking animal is not found in his catalogue or elsewhere. No. 7 is a variant of von Fritze 15, a hecte with two tunnies swimming in opposite directions. A closer stylistic parallel for our piece is a small silver coin in the von Aulock *Sylloge* (7327) on which the tunnies are shown swimming right. Staters and sixths with the types of

[11] The basic study is H. von Fritze, "Die Elektronprägung von Kyzikos," *Nomisma* 7 (1912).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

nos. 9 and 11 were known to von Fritze (64, 154); our smaller denominations are apparently unpublished. The charming female head of no. 10 appears on a stater in von Fritze (136); the only recorded fraction seems to be a hecte of the Ward Collection (602),[12] from the same obverse die as our coin.

PHOCAEA

12. *Obv.*: Two boars' heads facing; above, small seal.
Rev.: Quadripartite incuse.
EL Hecte 2.53

This piece was described as unpublished in the catalogue of the auction from which it was obtained;[13] its rarity justifies its inclusion here as an ANS acquisition. The obverse type is found at Lesbos but in this case the tiny seal and the reverse pattern attest a Phocaean origin.

RHODES

13. *Obv.*: Radiate head of Helios, three-quarters r.
Rev.: PO to l. and r. of rose; above, APXINOΣ; to lower l., Isis headdress; all in incuse square.
Æ Stater ↑ 8.55

14. Same types as no. 13 but the reverse has ΑΠΟΛΛΩΝΙΟΣ above the rose and the Isis headdress is at lower r.
Æ Drachm ↑ 4.24

15. *Obv.*: Female head r. wearing radiate diadem.
Rev.: PO to l. and r. of rose; above, illegible inscription; to lower r., Isis headdress; all in circle of dots.
Æ Hemidrachm ↑ 1.97

Kelley's three examples of Rhodian gold contribute new material to the study of this coinage made by Tony Hackens some years ago.[14]

[12] J. Ward, *Greek Coins and Their Parent Cities* (London, 1902), p. 98. The coin was subsequently sold by the Metropolitan Museum of Art in the Sotheby auction of 4 Apr. 1973, 509.

[13] Münzen und Medaillen 28, 19 June 1964, 169.

[14] T. Hackens, "Trésor hellénistique trouvé à Délos en 1964," *BCH* 89 (1965), pp. 518–34.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The stater with Archinos shares an obverse and probably a reverse die with Hackens 2.[15] There the symbol is described as a flower (?), but it seems to be the same Isis headdress that appears on the smaller denominations above. Our drachm is from the obverse die of Hackens 18–20 with a new reverse coupling the magistrate Apollonios and the Isis headdress symbol, a combination heretofore known only for staters. The hemidrachm apparently adds new obverse and reverse dies to the record, and again the Isis headdress is otherwise unattested for this denomination.

All three Rhodian coins were purchased in Turkey and most likely in the late 1940s, the time when Kelley was assembling the bulk of his collection. Although there is no indication of a hoard provenance in his records, it seems probable that the source was the 1945 find at Marmaris (*IGCH* 1355).

DEMETRIUS POLIORCETES

16. *Obv.*: Head of Athena r., wearing crested Corinthian helmet.
Rev.: ΔHMHTPIOY Nike standing l., holding stylis and wreath; to l., dolphin in circle; to lower r., A.
Ⱥ Stater ↓ 8.55

This is an unpublished emission of Demetrius from the mint of Tyre. The combination of symbol and letter is found on a late tetradrachm of that mint,[16] but the companion gold issue has only now come to light. For an earlier period, ca. 306–290 B.C., Newell attributes a fairly substantial coinage in gold to Tyre, all with the types and name of Alexander;[17] for the next few years, ca. 290–287 B.C., when Demetrius's name finally appears on the coinage, no gold is recorded.

Tyre was a conservative mint. Unlike other cities, it never used Demetrius's own types and only in the last years of Demetrius's reign was there a coinage in his name. Commenting on these latest tetra-

[15] Doublestriking makes it difficult to be certain of the reverse identity.

[16] E. T. Newell, *The Coinages of Demetrius Poliorcetes* (London, 1927), no. 31.

[17] E. T. Newell, *Tyrus Rediviva* (New York, 1923). Ten varieties of the stater are listed. While there is a stylistic similarity in the rendering of the hair and the ends of the helmet crest between our new coin and the obverses of Newell's Series 2 (ca. 301–290 B.C.), there is no die identity.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

drachms, Newell saw in the scanty output and clumsy workmanship a reflection of the desperate circumstances of the city, surrounded by Egyptian troops and cut off from normal commercial outlets. It is, therefore, especially interesting to note that Tyre was able to put out at least one gold issue in a final effort to avert catastrophe, immediately prior to the Ptolemaic occupation of ca. 286/5 B.C.

ANTIOCHUS II

17. *Obv.*: Diademed head of Antiochus II r.
Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ Apollo, draped to the waist, seated l. on omphalos and holding bow; to l., ΨΚ.
AV Stater ↑ 8.48

Newell had no record of this issue, which seems to be known only from the Kelley specimen. Its obverse bears a well-executed, but in no way remarkable, portrait of the second Antiochus; its reverse, however, is noteworthy for the rendering of the type and for the unusual monogram.

None of the eastern mints of the early Seleucids shows a seated Apollo holding a bow instead of the customary arrow. Even in the west, the representation is very rare. Newell's survey lists emissions of Antiochus I at Sardes and Magnesia ad Maeandrum (*WSM* 1363–67, 1470–71), of Antiochus II at Magnesia (*WSM* 1473–81, 1483, 1486–88),[18] and of Seleucus III at Antioch and Seleuceia ad Calycadnum (*WSM* 1028, 1330). Of these mints, Magnesia is the only one which consistently places a bow in the hand of the seated Apollo and the only one where the type is associated with Antiochus II.

A further link between our stater and the Magnesian silver of Antiochus II is provided by the drapery of the Apollo figure. When the god with bow appears at Sardes, Antioch and Seleuceia, he is generally

[18] Newell divides the coinage between Magnesia and Ephesus, assigning nos. 1473–81 and 1483 to the former mint and nos. 1486–88 to the latter. More recently Henri Seyrig ("Monnaies hellénistiques," *RN* 1963, pp. 31–35) has established with a high degree of probability that the two mints are in reality one, all issues having been struck at Magnesia.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

nude or scantily covered.[19] This is also true at Magnesia for issues of Antiochus I and the early strikings of Antiochus II with the portrait of his father. Later when the coinage bears the portrait of Antiochus II himself, there is a marked change. From the waist down, Apollo is heavily draped. The garment is drawn up in taut folds from the ankle of the outstretched leg, and a thick roll of the cloth encircles the lower torso and falls over the omphalos. The treatment is identical with that of the Kelley stater.

Almost certainly the mint of no. 17 is Magnesia but nothing closely resembling its rather strange monogram is to be found there or elsewhere in Newell's record.[20] Under the circumstances the exact position of the issue in the Magnesian sequence must remain somewhat conjectural. The evidence of style, however, strongly suggests that it belongs with *WSM* 1483, a tetradrachm without symbol or monogram bearing a portrait of Antiochus II that differs from those of other Magnesian issues but is strikingly similar to the representation on our stater. Seyrig places the tetradrachm emission at the very end of the sequence at Magnesia; if this is so, then it was toward the end of his reign that Antiochus used the mint for a single issue of gold.

PAPHLAGONIA

SINOPE (?) ca. 360–ca. 320 B.C.

18. *Obv.*: Head of Sinope l., wearing single-drop earring.
Rev.: Sea eagle on dolphin l.; below, 𐤌𐤕𐤓𐤐𐤎𐤍𐤉
(Mtrpsnỳ = Motarnapsi).
Drachm ← 5.83

19. As 18, but from different dies.
Drachm ↑ 5.59

[19] Seleuceia is an exception; there the drapery is clearly defined.

[20] Two issues tentatively attributed to Tarsus under Seleucus II (*WSM* 1317–18) have monograms with some of the elements of ours and one is rendered with the same peculiar diagonal stroke at the beginning:  and  . This would seem, however, to be nothing more than coincidence.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

John W. Betlyon has kindly read our coins' inscription, hitherto unknown, with the following comments: "The script is Aramaic of the 4th century B.C. I would vocalize the name *Mōṭarnapsī*, meaning 'the abundance of *Napsī* / my soul.' The spelling of *n p s* with *samek* instead of *šin* is known in some dialects of Aramaic, and cannot be considered unusual. The name is otherwise unknown."

Several classes of coins as ours, with Sinope's types but with inscriptions other than the city's ethnic, are known. It is generally agreed that those bearing the satrap Datames' name (in Greek) were struck between the outbreak of the Satraps' Revolt in 370 B.C. and Datames' death in 362. On Datames' coins, as on ours, Sinope wears a single-drop earring and no necklace. Two other groups are those as our no. 20 below and those bearing Ariarathes' name (also in Aramaic); on these Sinope wears a triple-drop earring and a necklace, and an aplustre often appears in the field. These two latter groups date from ca. 345 at the earliest to ca. 320.[21]

A fairly large group of coins with other varying and often blundered Aramaic inscriptions are usually understood as barbaric imitations,[22] and so most of them would appear to be. A few of these, however,[23] including our coins, are of good style, with inscriptions in perfectly good Aramaic script—and are of the obverse style (single-drop earring and no necklace or aplustre) current at Sinope not long after 360 B.C.[24] They cannot be imitations of Abdssn's or Ariarathes' coins. More extensive study of weights and of die axis positions will in time aid in understand-

[21] E. S. G. Robinson, "A Find of Coins of Sinope," *NC* 1920, pp. 12–14.

[22] *RGA*, vol. 1, fasc. 1, Sinope 26–30.

[23] For example, the coin published by J. P. Six in "Sinope," NC 1885, no. 38 (the first coin listed under *RGA*, vol. 1, fasc. 1, Sinope 27); of this Betlyon says (private communication), "This is an unknown name form in Aramaic, and is most probably a Persian name, vocalized 'Anantarat. The script is good Aramaic." Another coin with obverse very similar to ours, whose inscription does not appear in *RGA*, is B. Peus 280, 30 Oct. 1972, 153. Betlyon reads this coin's inscription as *trtn*, or *tdrtln*, "two," adding that "a letter or two may be off flan; if so, we have a personal name of some sort."

[24] Our coins, without necklace, must be classed with the earlier of those placed by Robinson (above n. 21), pp. 14–15, ca. 360–345, during which time the necklace was introduced.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ing coins such as ours,[25] but for the present where, when, and by whom they were struck remains unclear.

SINOPE ca. 340–ca. 330 B.C.

20. *Obv.*: Head of Sinope l., wearing triple-drop earring and necklace; to l., aplustre.
Rev.: Sea eagle on dolphin l.; below, 𐤀𐤁𐤃𐤎𐤍 (Abdssn).
Drachm → 5.53

Our coin is an unusually well-preserved specimen of this rather puzzling issue of Sinope: it is not only little worn but has avoided the chisel cuts which deface so many of Sinope's coins.

Several proposals have been made for the identification of the individual whose name appears on our coin, but none are satisfactory. Comparison with other Sinopean coins reveals that coins as ours must have immediately preceded the coins bearing Ariarathes' name, also in Aramaic, which were struck perhaps 328–322 B.C.; but the individual named on our coin remains unknown.[26]

BITHYNIA

HERACLEIA PONTICA ca. 385–ca. 365 B.C.

21. *Obv.*: Bearded head of Heracles l., wearing lion's skin headdress; below, club.
Rev.: HPAKΛEIA Bull butting l.; above, trace of uncertain marking.
Tetradrachm (Rhodian standard) ↖ 15.42

Our coin is distinguished as much for its handsome obverse portrait as for its uniqueness: it is the largest coin of Heracleia known before

[25] Our coins (and those listed in *RGA*, vol. 1, fasc. 1, Sinope 26, 27) are heavier than virtually all those attributed to Abdssn and Ariarathes (*RGA*, vol. 1, fasc. 1, Sinope 22–25). While Sinope's official strikings' die axis positions tend towards ↑ or ↓, Robinson notes that the barbaric imitations' axes are random: E. S. G. Robinson, "Sinope," *NC* 1930, p. 11.

[26] Robinson (above, n. 21), pp. 12–15.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the Attic-weight tetradrachms of Lysimachus's time. It also leads to a reexamination of the strikings of Heracleia in the first half of the fourth century B.C. The following brief discussion will not, however, include fractions, which can only be understood in relation to their accompanying drachms.

Drachms with the types of our tetradrachm are usually considered Persic drachms or sigloi, although their weights range from over 5 to about 3.5 grams.[27] They are succeeded by coins with a younger, beardless head of Heracles on obverse, and a head of Tyche (Heracleia personified? or Hera?) on reverse. With these latter types are known rare large coins, approximately 11 1/2 to 12 grams, and smaller ones of ca. 3.6–4.0 grams.[28] These larger coins have usually been termed Aeginetic staters, and the smaller ones "Aeginetic tetrobols."

Our coin provides the opportunity for a fresh look at these coinages. A corpus of the rather rare Heracles-bull drachms has not been attempted, but the weight distribution of the 32 specimens of which a record is available at the ANS is revealing. Eight issues can be distinguished. Five of these issues, with sixteen coins in all, yield fourteen weights between 4.80 and 5.26 grams, with one coin somewhat lighter and one heavier; they must indeed be considered Persic drachms. A sixth issue yields one coin of 5.05 grams, one of 4.52, and five between 3.59 and 3.99. This issue seems transitional between the five heavy issues and the remaining two, which yield seven weights between 3.72 and 3.99 grams, and two slightly heavier (4.20 and 4.22).[29]

[27] *RGA*, vol. 1, fasc. 2, Héraclée 5.

[28] *RGA*, vol. 1, fasc. 2, Héraclée 16–18, 20–21. The pieces of over 5 grams which have made their way into *HN*, p. 515, are forgeries: *RGA*, vol. 1, fasc. 2, p. 347, n. 1.

[29] Heavy: no markings; crescent on rev.; M on rev.; club on rev. (not in *RGA*; see Naville, 14 Mar. 1921, 2133); club on obv. "Transitional": club on obv. and ⋋ and ivy leaf on rev. Light: grape cluster on rev.; club on obv. and ⋋ on rev. The club would seem part of the obverse type rather than an issue marking; note that coins with no reverse symbol, both with and without club on obverse, are heavy issues. The coins fall into two distinct stylistic groups: those with club on obverse have obverse portraits quite different from those without, and their accompanying bulls have tails hanging straight down, whereas the bulls found with clubless obverses have tails looped above their rumps. Although our tetradrachm's reverse marking is not preserved, its obverse perhaps resembles most closely those of the "transition-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The Heracles-bull drachms thus seem struck to two standards, the Persic and a lighter one—and the lighter one is the same as that of the smaller Heracles-Tyche coins. Our tetradrachm explains the weights of these lighter coins with both bull and Tyche reverses: they are not "Aeginetic tetrobols," an unlikely denomination at best, but Rhodian drachms. They must be understood in connection with the earlier multiple piece, our Rhodian-weight tetradrachm, not in connection with the Heracles-Tyche "Aeginetic staters." These latter are indeed just about three times the weight of their accompanying Rhodian-weight drachms, but they are also, perhaps more significantly, just twice the weight of the abundant drachms of Sinope to the east.

The Rhodian weight standard was adopted in the early fourth century and used until shortly after mid-century by a great number of Asiatic cities; most significantly by Heracleia at her most important neighbor, Byzantium, as well as at other cities in northwest Asia Minor, for example Calchedon, Cius, and Abydus.[30] Thus the standard is not a surprising one for Heracleia.

G. Le Rider has recently argued that the Persic-weight coinage of Byzantium and other nearby cities was struck in the second half of the fourth century, following rather than preceding their Rhodian-weight coinages, as the traditional view had been.[31] This cannot have been the case at Heracleia, however, for coinages with other standards and types, securely dated by the tyrants' names they bear, formed Heracleia's output after 345 B.C. Our Persic-weight Heracles-bull drachms must precede, if indeed they are not contemporary with, the Rhodian-weight coins with the same types.[32]

---

al" issue: e.g. *RGA*, pl. 55, 7. Both styles occur in both heavy and light issues, indicating that all the drachms, heavy and light, were either produced simultaneously or that one standard followed immediately on the other.

[30] Byzantium and Calchedon: E. S. G. Robinson, "A Find of Coins of Thasos," *NC* 1934, pp. 244–54; G. Le Rider, "Trésor de monnaies trouvé à Thasos," *BCH* 80 (1956), pp. 1–19; these and other indications are summarized and discussed in G. Le Rider, *Deux trésors de monnaies grecques de la Propontide. Bibliothèque archéologique et historique de l'Institut Français d'Archéologie d'Istanbul*, 18 (Paris, 1963), pp. 47–56. At Byzantium and Calchedon, at least, as at Heracleia, the weights are somewhat heavier than those of Rhodes herself.

[31] Le Rider, *Deux trésors* (above, n. 30), pp. 32–61.

[32] See note 29.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

When was our handsome coin struck? The Rhodian weight standard seems to have been adopted in the area shortly after the signing of the Peace of Antalcidas in 387, so perhaps ca. 385 B.C. is a reasonable terminus post quem. The succeeding Heracles-Tyche coins have in the past been put to the reign of the tyrant Satyrus, 353–345 B.C.; this attribution has now been demolished by Peter Franke, so that the Rhodian-weight Heracles-bull coins and the Heracles-Tyche coins both now belong to the broad period ca. 385–345 B.C.[33]

As our coin's obverse most closely resembles those of the "transitional" issue of its accompanying drachms,[34] it may have been struck precisely to draw attention to the new standard, perhaps shortly after 385. One feature of its obverse, however, associates it with the succeeding Heracles-Tyche coins: the short ends of the ties (?) on the headdress over Heracles' brow are not found on other Heracles-bull obverses, but only on the Heracles-Tyche coins,[35] so that our coin may fall at the end of the Heracles-bull strikings. For the moment, ca. 385–365 B.C. seems the most probable period within which to date our tetradrachm.

KINGS OF BITHYNIA

PRUSIAS I ca. 238 (?)–183 B.C.

22. *Obv.*: Diademed head of Prusias I r.
Rev.: ΒΑΣΙΛΕΩΣ ΠΡΟΥΣΙΟΥ Zeus standing l., holding scepter in r. hand and fulmen in l. hand; to r., 𐤁 over Τ.
Tetradrachm ↑ 16.70

A die duplicate of our coin appeared on the market in 1910,[36] but has apparently occasioned no comment. The two coins differ from others of the Bithynian kings in the stance given to Zeus. On other coins of

[33] P.R. Franke "Zur Tyrannis des Klearchos und Satyros in Herakleia am Pontos," *AA* 1966, pp. 130–39. The lower date is actually more probably 340 B.C.: see p. 135, n. 26.

[34] See note 29.

[35] E.g. *RGA*, pl. 55, 30 = *BMCPontus* Heraclea 16; even clearer examples are *de Luynes* 1383–84.

[36] Rollin et Feuardent, 9 May 1910, 491.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Prusias I and his successors Zeus holds the scepter in his left hand, and crowns the king's name with his right hand; and the fulmen occurs (surmounted by an eagle from Prusias II on) in the left field over the monograms which also now are placed at the left.

Tetradrachms of Prusias I are known from an obverse die very similar to ours, and with our monograms, but with Zeus in the usual position.[37] Our coin, with its exceptional reverse and its handsome obverse, must be one of Prusias I's initial strikings.

MYSIA

CYZICUS ca. 300 B.C. (or shortly after)

23. *Obv.*: Head of Kore Soteira l., wearing grain wreath and scarf around hair; above, traces of ΣΩΤΕΙΡΑ.
Rev.: ΚΥΙΙ Apollo seated r. on omphalos, holding patera in r. hand; in l. arm, cithara ; below, tunny; to r., Ϟ.
Uncertain denomination ↑ 10.63

Our coin is a second specimen of a rare variant known to von Fritze, and struck from the same dies.[38] On most coins of this series, the lyre rests on the ground, and the patera is emphasized, depicted larger and in more detail. Apollo on our coin almost seems to be playing the lyre, but the raised area at the end of his arm is presumably the usual patera.

IONIA

MAGNESIA ca. 300 B.C. (?)

24. *Obv.*: Mounted horseman r., wearing helmet and cuirass, chlamys flying behind; he carries spear in r. hand.
Rev.: ΜΑΓΝ Humped bull butting l.; to r., ear of barley; in exergue, ΚΑΛΛΙΑΝΑΞ ΚΑΛΛΙΚΡΑΤΟΥ; all in maeander border.
Double siglos ↑ 10.90

[37] *RGA*, vol. 1, fasc. 2, Rois de Bithynie 9 (pl. 29, 13) = *de Luynes* 2422.

[38] H. von Fritze, "Die Silberprägung von Kyzikos," *Nomisma* 9 (1914), no. 27. The date here given is von Fritze's (pp. 49–51).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Phoenician-weight tetradrachms and smaller coins with our coin's types have long been known,[39] as have coins with the same types but with different magistrates and of intermediate weights.[40] The latter have traditionally been termed "Attic octobols" and "Attic tetrobols."

Coins of our denomination are extremely rare, however. The first known appeared in a 1910 sales catalog, but occasioned no comment.[41] Then a group appeared on the market in 1921, evidently from a hoard, and came to the notice of the British Museum. G. F. Hill described the coin acquired by the museum, listed the four magistrates in the group, and observed that, as they were of double siglos weight, the previously known "Attic octobols" and "Attic tetrobols" of Magnesia and other cities must actually have been struck as sigloi and half sigloi.[42] Our coin adds no new dies or magistrates, but furnishes one more example of a very rare issue.

CARIA

CNIDUS ca. 390–380 B.C.

25. *Obv.*: Forepart of lion r.
Rev.: ΛΥ bracketing head of Aphrodite r., wearing *sakkos*; all in shallow incuse circle.
Hemidrachm (Rhodian standard) ↙ 1.74

A die duplicate of our coin was published in 1903, and tentatively assigned to Lydae, a small coastal town on the Caro-Lycian border; from this attribution came Lydae's inclusion as a possible Greek mint in the second edition of *Historia Numorum*.[43]

Lydae was not a mint, however, for the coins are of Cnidus. They belong to a small and virtually unnoticed group with an occasional

[39] E.g. *BMC Ionia* Magnesia 2.

[40] E.g. *BMC Ionia* Magnesia 3–6.

[41] Hirsch, 24 May 1910, 542.

[42] G. F. Hill, "Greek Coins Acquired by the British Museum in 1921," *NC* 1922, pp. 168–70, no. 54. Presumably also from the hoard Hill describes are Naville, 18 June 1923, 2558–60 (similar double sigloi) and 2561 (a lead weight with a crude copy of the coins' types, and the name of one of their magistrates). A fifth magistrate has since appeared: ΜΑΙΑΝΔΡΙΟΣ ΔΙΟΝΥΣΙΚΛΕΟΥ (H. Grunthal, 5 Dec. 1949, 377).

[43] G. F. Hill, "Some Coins of Caria and Lycia," *NC* 1903, p. 399; *HN*, p. 622.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ethnic KNI on obverse, and magistrates' names, abbreviated as ours or in full, on reverse.[44] Babelon, in the *Traité*,[45] placed such coins with the later hemidrachms with obverse and reverse types transposed, but Head did not mention them in either *BMC* or *Historia Numorum*.

The end of Cnidus's abundant Aeginetan-weight coinage has recently been firmly assigned to 394 B.C. by H. A. Cahn. After the Battle of Cnidus in that year were issued the Rhodian-weight federal issues of Cnidus and other Asiatic cities;[46] with these Cahn associates Cnidus's first small Rhodian-weight issues with her own types, drachms and obols retaining the Aeginetan-weight coins' lion on obverse and Aphrodite on reverse.[47] Cnidus's large succeeding coinage retained the Rhodian weight but transposed the obverse and reverse types, which remained in their new position until the city ceased to mint. From their beginning, Rhodian-weight coins with Aphrodite obverse included magistrates' names, present on no lion-obverse coins of either weight standard with the single exception of the group to which our coin belongs.

This group is thus the last one at Cnidus with lion on obverse and goddess on reverse. It is also the first with magistrates' names, and the coins with abbreviated names, such as ours, are presumably the earliest of the group. It must have been struck soon after the federal coinage, probably in the decade 390–380 B.C.

IASUS ca. 250 B.C. or later (?)

26. *Obv.*: Laureate head of Apollo r.
Rev.: IA Hermias swimming r., with left arm over dolphin; below, AΓΛAOΦΩN.
Drachm ↑ 5.02

[44] E.g. *SNGvAulock* 2602 (KNI and KΛEIΣIΠΠIΔAΣ), 2603 (ΦIΛEΩN), and 2604 (ΛYΣ). An ANS coin with KNI on obverse and AP bracketing a reverse head very similar to our coin's is shown on Plate 2, A. O. Mørkholm has brought to my attention the unpublished dissertation of J. H. Nordbø, *Utmyntingen på Knidos, 349 f. Kr.—ca. 210 e. Kr.* (Oslo, 1972). Our issue, not included in Nordbø's catalog, belongs with the other hemidrachms here cited to his series 4, dated 390–340 B.C.

[45] *Traité* 2.2, nos. 1648–49.

[46] E.g. *BMCCaria* Rhodes 27.

[47] H. A. Cahn, *Knidos*, AMUGS 4 (Berlin, 1970), pp. 173–74 and p. 174, n. 500. *BMCCaria* Cnidus 26 is an example of the drachms.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Our drachm is a relatively well-preserved one in this rare series, and presents a new magistrate's name: ΑΓΛΑΟΦΩΝ.

TABAE ca. 40 B.C. (?)

27. *Obv.*: Bearded head of Heracles r.
Rev.: TABHNΩN Winged Nemesis standing l., plucking upper part of chiton with r. hand and holding filleted cornucopiae in l. hand; to l., ΠΑ ΑΡΤΕΜΩΝ.
Drachm ↑ 3.78

Our coin adds a new reverse type to those already known for the little city of Tabae, a type which in its combination of details seems unknown in coinage or elsewhere. The coin also aids in the interpretation of Tabae's other silver coinage.

Representations of the somewhat ill-defined deity Nemesis varied greatly in antiquity.[48] Little is known of the famous cult-image at Rhamnous in Attica. Several images are known to have existed at Smyrna, another major center of her cult, and Pausanias tells us that only the later images here were winged.[49] It is this Smyrnaean type, sometimes winged, sometimes not, which appears on coins, gems, and in sculpture from late Hellenistic times on: Nemesis plucking her robe as our figure does, and with attributes of cubit, wheel, bridle, patera, rudder, griffin, or others. Our Nemesis, however, is the only representation holding a cornucopiae known to the present author in any medium.

In late antiquity Nemesis was frequently confounded in art and literature with other deities: Tyche, Adrastea, Fortuna, Aphrodite, Isis, and others—but most frequently with Tyche. Our coin's cornucopiae presumably then indicates a representation, and probably a local cult at Tabae, of a syncretistic deity Nemesis-Tyche.

J. and L. Robert have compiled a list of Tabae's issues in silver and in bronze.[50] Neither they nor this author have assembled a corpus or

[48] The following brief discussion is based on W. H. Röscher, *Lexikon der griechischen und römischen mythologie*, 3 (Leipzig, 1897–1909), cols. 117–66, esp. col. 163; and on DarSa, s.v. "Nemesis."

[49] Paus. 1.33.7.

[50] J. and L. Robert, *La Carie*, 2: *Le Plateau de Tabai et ses environs* (Paris, 1954), pp. 123–46, esp. pp. 123–37.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

attempted a die study, but an examination of examples available in trays and in publications at the ANS has provided few additions and corrections to their list.

Our magistrate Artemon is known from two series of silver strikings at Tabae. One, properly termed hemidrachms by the Roberts, bears Athena's head on obverse and Nike on reverse. This is the Roberts' issue C, on which *Ἀρτέμων Πα[πίου] Ἀρ[χων]* occurs, along with three other magistrates: *Ἄτταλος Ἀρ[χων] Βραχυλλίδας Καλ*, and *Μοαγέτης*.[51] The Roberts also include the magistrate *Καλ* in issue C, but this magistrate's reverses are all encircled by a wreath, and *Καλ* must belong in their issue D, which has C's types but with Nike carrying a trophy instead of a palm, and which has the wreath encircling the reverse type.[52] I have found 21 specimens of C, and 8 of D: the mean weight of each group is 1.76 grams.

Ἀρτέμων Παπίου Ἀρ[χων] also appears as the only magistrate on a relatively common group of heavier coins whose obverses show a head of Zeus, Heracles, or (once) Athena, and whose reverses show Zeus, Artemis Huntress, or Artemis Ephesia. These are the Roberts' issues E, F, G, H, and I.[53] At first glance our coin with its Heracles head seems merely to add another reverse type to the three already known in this series. The Roberts do not deal with weights; their only indication that these larger coins do not belong with the hemidrachms with Artemon's name is that they term issues E-I "drachmes?" The weights of the 32 unbroken specimens of Groups E-I which I have located range from 2.32 to 3.10, with a mean of 2.60. Our coin weighs 3.78, far too heavy to belong to issues E-I.

It is, rather, the only known drachm corresponding to the Roberts' issue C, where Artemon also appears—and, significantly, always only

[51] E.g. *BMCCaria* Tabae 21–22, 24–25.

[52] E.g. *SNGCop* Caria 535. The wreath is visible to l. even on one of the Roberts' illustrated coins of *Καλ*: pl. 21, 15. The trophy is also present on all of the *Καλ* coins I have found where the object is at all distinguishable.

[53] E.g. *BMCCaria* Tabae 17–20. A new combination (Zeus head and Artemis Ephesia), not included in issues E-I, has recently appeared: Auctiones S.A., 7 June 1977, 270.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

with *Πα*, as on our coin, never with the full patronymic of E-I. Further, on our coin and on issue C, the inscriptions are TABHNΩN and APTЄ-MΩN; on E-I they are always TABHNΩN and APTEMΩN.

The Roberts placed the hemidrachms C and D before the larger coins E-I because the hemidrachms had more abbreviated names and patronymics; this placement is surely correct. By this same criterion, issue D with its two abbreviated names (*Γορ* and *Καλ*), must be placed before C, with its full names. An ANS coin of issue C (without wreath) tends to confirm this order. It bears a new magistrate for this group: *ΠΑΠΙΑΣ ΓΟΡ* (Plate 3, B). Thus, we seem to see in issue C two sons (*Παπίας Γορ* and *Βραχυλλίδας Καλ*) of the two issue D magistrates *Γορ* and *Καλ*. Our Artemon is then of course most probably Papias's son and *Γορ*'s grandson.[54]

Finally, a coin which seems to have escaped the Roberts' net provides the half-denomination of issues E-I. A silver piece in Aberdeen has a female head in polos (Homonoia?) on obverse and the hemidrachms' usual Nike (without encircling wreath) on reverse.[55] The reverse inscription is TABHNΩN APTEMΩN ΠAΠIOY AP arranged in a circle just as on most reverses of issues E-I. Its weight is 1.20 grams, far less than any coin found in issues D or C, and more than a half gram less than those groups' mean weight of 1.76.

To summarize: the five groups here discussed are shown in tabular form below. Mean weights are preceded by parentheses enclosing the number of weights on which the means are based.

[54] The same three generations of this family seem to occur in the Roberts' bronze issue W (Zeus head/pilei of the Dioscuri: e.g. *BMCCaria* Tabae 3-12), where *Γορ* and *Παπίας* occur. Another inscription, *ΠΑ/ΑΠΟ*, the Roberts restore as *Πα[πίας] Ἀπο*, but (especially as the *Ἀπο* occurs in the prominent central position occupied by other magistrates' names in this series) *Πα* would appear to be the patronymic. *Ἀπολλω-* and *]νιος* are known from other examples of issue W listed by the Roberts; all three varieties probably refer to the same man: *Γορ*'s grandson and Papias's son Apollonius—who bears an entirely appropriate name for our Artemon's brother. Issue W thus parallels at least in part the silver issues discussed here.

[55] *SNGDavis* 297.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Drachms		*Hemidrachms*	
		Robert D e.g. Weber 6576 Athena/Nike in wreath ΚΑΛ ΓΟΡ	(8) 1.76
Robert — No. 27, here published	(1) 3.78	Robert C e.g. *BMCCaria* Tabae 21–23, 24-25	(21) 1.76
Heracles/Nemesis ΑΡΤΕΜΩΝ ΠΑ		Athena/Nike ΠΑΠΙΑΣ ΓΟΡ ΑΡΤΕΜΩΝ ΠΑ ΑΡ ΒΡΑΧΥΛΛΙΔΑΣ ΚΑΛ ΑΤΤΑΛΟΣ ΑΡ ΜΟΑΓΕΤΗΣ or ΜΟΑΓΕΤΗC	
Robert E, F, G, H, I e.g. *BMCCaria* Tabae 17–20 Zeus, Heracles, Athena/ Zeus, Artemis Huntress, Artemis Ephesia ΑΡΤΕΜΩΝ ΠΑΠΙΟΥ ΑΡ	(32) 2.60	Robert — *SNGDavis* 297 Homonoia(?)/Nike ΑΡΤΕΜΩΝ ΠΑΠΙΟΥ ΑΡ	(1) 1.20

There is no external evidence for the dates of Tabae's silver and style is a poor criterion at this late date. The coinage has received little attention: Head tentatively assigned the issues here discussed to "early Imperial times to Nero";[56] or as first among those attributed to "Imperial times (M. Antony to Nero?)."[57]

The Roberts have made the first serious attempt to place Tabae's silver coinage in a relative chronological order, based on the degree of fullness with which magistrates' names and patronymics are inscribed.

[56] *BMCCaria*, p. 162.
[57] *HN*, p. 626.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

They conclude that the silver pieces with Augustus's name and types are Tabae's last silver issues, and that the silver discussed here and a few small following issues all fall between 81 B.C. and Augustus's time.[58] Space prevents a repetition of their arguments here, arguments which the present author finds completely reasonable and convincing.

The wreath and trophy of issue D could well refer to the Roman defeat of Mithradates in the 80s B.C. Three generations, as we have seen, appear to have struck the hemidrachms D and C, bringing us down at least some decades to the time when Artemon in this third generation struck our coin. The disturbances and exactions of some of the principals in the Roman Civil Wars are the most obvious circumstances which might have occasioned our drachm coinages at Tabae between, say, 50 B.C. and Augustus's final victory in 31 B.C.

Some unusual circumstance must be adduced for the exceptional standard of the Roberts' issues E-I, for all other drachm issues of Tabae, both earlier and later, have far higher mean weights than the 2.60 grams of E-I.[59] Remarkable also are the inscriptions on most of E-I: their circular placement, around the entire outer edge of the coin, is most unusual for any Greek mint and unique at Tabae. And on many specimens, significantly, dots separate the words.

Both the exceptional weight and the unusual features of E-I's inscriptions can be explained by the supposition that the coins were struck to circulate as cistophoric drachms, supplementing Antony's cistophori, minted in 39 B.C.[60] These, like many denarii of the very late 40s and the 30s B.C., have full circular inscriptions, with dots separating the words. Theoretical weight for an accompanying drachm would be 3.00 grams,[61] as compared to our coins' 2.60—but the second-century

[58] Robert (above, n. 50), p. 134.

[59] Earlier: Robert issue A (e.g. *BMCCaria* Tabae 1) 3.78 (six examples found). Later: issue J (*BMCCaria* Tabae 26–28) 3.31 (twelve examples); issue K (*KlMünz*, p. 159, no. 13) 2.83 (one example: before J and contemporary with E-I?); issues L-M (*BMCCaria* Tabae 29–30) 3.31 (five examples); and issue Q, under Augustus (*KlMünz*, p. 517, no. 2) 3.58 (three examples).

[60] E.g. *BMCRR*, pl. 114, 1–4.

[61] Most of Antony's extant cistophori circulated for an extremely long time and are very worn. The mean weight of 37 of 38 well-preserved specimens from a hoard at the Istanbul Museum must approximate the original weight. Their mean weight is precisely 12.00 grams: C. H. V. Sutherland, N. Olçay, and K. E. Merriman, *The*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

cistophoric fractions weighed somewhat less than their theoretical weights, and, more relevantly, each hemidrachm issue of Tabae weighs considerably less than its corresponding drachm issue.[62]

If issues E-I can be placed in the 30s B.C., then, and it must be stressed that this dating is tentative in the extreme, our coin, would have been struck perhaps ca. 40 B.C. It may be significant that the only representation of Nemesis on the Republican coinage is on an aureus struck for the second triumvirate: Lepidus, Octavian, and Antony.[63]

LYDIA

THYATIRA 133/132 B.C.

28. *Obv.*: Cista mystica with open lid, from which a serpent emerges; all within ivy wreath.
Rev.: ΘYA Bow case between two coiled serpents; above, fulmen; in serpent coils to l. and r., BA and EY; to r., beardless head of Dionysus (?); on bow case, B (year 2).
Cistophoric tetradrachm ↑ 12.51

As its reverse states, our coin was struck by a King Eu(menes). For decades, such coins prevented the proper understanding of all cistophoric chronology, for BA EY was universally assumed to be Eumenes II of Pergamum (197–159 B.C.), and the recognition that the BA EY coins must have been struck long after the earliest cistophori seemed to push the introduction of the coinage to an improbably early date.

This and other problems were eliminated at one stroke in 1954 when E. S. G. Robinson identified BA EY as the pretender Aristonicus. The original inspiration is said to have come to Robinson while shaving, but

---

Cistophori of Augustus, The Royal Numismatic Society Special Publication No. 5 (London, 1970), pp. 2–3.

[62] From the examples found by the present author, this statement holds true not only for the issues here discussed but for all of Tabae. For the second-century weight of cistophoric drachms, see F. S. Kleiner and S. P. Noe, *The Early Cistophoric Coinage*, ANSNS 14 (New York, 1977), p. 17: tetradrachms weighed ca. 12.60 grams, and drachms ca. 3.05 grams.

[63] Crawford, vol. I no. 494.35.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

his presentation was, as ever, thorough, masterful, and utterly convincing.[64] Further examples of Aristonicus's cistophori collected by F. S. Kleiner[65] have only reinforced Robinson's conclusion: that Aristonicus's small cistophoric coinage (four obverse dies) was struck during his revolt of 133–130 B.C. by a mobile mint at three small Lydian cities in turn, ceasing when the pretender was finally trapped.

Our coin is from a known obverse, but possibly from a new reverse die.[66] It adds nothing to the historical record, but is of interest as belonging to a small group which provides one key to the dating of that major late Hellenistic coinage, the cistophori.

LYCIAN DYNASTS OF THE FIFTH CENTURY

KUPRLLI

The following three staters belonging to this Lycian dynast are either new types or variants not included in Otto Mørkholm's recent corpus of Kuprlli's coins.[67] A fourth Kuprlli stater is entered below merely to record its present whereabouts.

29. *Obv.*: Dolphin r., over beaded exergue line; above, demarcation line.
Rev.: Triskeles within square incuse with dotted border; floral motif in upper l.; K O.
Stater ← 9.775

This issue differs from *Kuprlli* 5 in the British Museum in that on the reverse of the latter, one leg of the triskeles ends in a griffin's head,

[64] E. S. G. Robinson, "The Cistophori in the Name of King Eumenes," *NC* 1954, pp. 1–8.

[65] Kleiner-Noe, (above, n. 62), pp. 103–6.

[66] Obverse : Robinson A = Kleiner 1. The reverse may be Robinson b = Kleiner b (of a coin in commerce not illustrated by either author), but is not any of the other eight reverse dies in Kleiner.

[67] O. Mørkholm and J. Zahle, "The Coinage of Kuprlli," *Acta A* 43 (1972), pp. 57–113 (hereafter cited as *Kuprlli*). Kuprlli's dates until recently given as ca. 460 B.C. have now been updated to ca. 485 as the result of the presence of his coins in the Asyut Hoard. See M. Price and N. Waggoner, *Archaic Greek Silver Coinage the "Asyut" Hoard* (London, 1975), nos. 767–70 and pp. 101–2 (hereafter cited as *Asyut*).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

and the floral motif is absent. The Kelley piece might, rather, provide a stater denomination for the tetrobol, *Kuprlli* 6 which, however, also lacks the floral ornament.[68]

30. *Obv.*: Winged lion protome r., within circular dotted border.
Rev.: Triskeles within square incuse with dotted border; K.
Stater ↓ 9.09

This coin is a variant of *Kuprlli* 179a on which the winged lion protome faces left instead of right, the lion style seems different; and the higher weight of our coin might suggest a different Lycian mint.[69]

31. *Obv.*: Horse standing l. on exergue line; above, triskeles.
Rev.: Triskeles within square incuse with dotted border; KO[Γ].
Stater ↗ 8.53 *Kuprlli* 75, this coin.

Recorded by Mørkholm as in commerce, 1951, this coin was acquired by Robert Kelley from the Münzen und Medaillen auction (Oct.-Nov. 1951, 162).

32. *Obv.*: Winged goat kneeling l.; in front, triskeles within circular dotted border.
Rev.: Triskeles within square incuse with dotted border; KOΓPΛΛE.
Tetrobol ↑ 2.99

No parallels have yet been found for this obverse type. It seems to be entirely new.

THIBAN

33. *Obv.*: Boar walking l., above, triskeles; below, ⊙.
Rev.: Triskeles, the three branches of which end in cock's head, duck's head, and griffin's head, respectively; pellet in each interstice and in the central ring; all within square incuse with dotted border.
Stater 9.63

[68] This ornament does occur on other of Kuprlli's issues; namely: *Kuprlli*, nos. 1, 2, but with a boar obverse.

[69] See *Kuprlli*, pp. 71–73, and n. 75, below.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Acquired by Kelley in a Seaby sale (1950, no. 698), this itinerant and unique stater at one time in the Pozzi Collection[70] has now found a permanent resting place. In the Pozzi catalogue the reverse type is incorrectly described as a triskeles with three cock's head finials. The catalogue gives this coin to Thiban with a questionmark,[71] citing British Museum specimens which do in fact have a cock's head at the end of each leg. The three different heads as described above are clearly to be seen, as was recognized by Zahler who illustrates a similar stater recently acquired by the Ashmolean Museum.[72] On the reverse of the Ashmolean piece, Thiban's name appears in place of the three pellets. In all probability our coin does belong to the same dynast.

TANAGURA

34. *Obv.*: Winged horned lion crouching l.; above rump, 𐊗.
Rev.: Triskeles; 𐊗 in lower l. corner; 𐊕𐊔𐊍↑𐊖𐊏𐊐↑; all within square incuse.
Stater ↑ 8.55 Overstruck

This lesser dynast, known like so many of his colleagues only by his coins, remained unrepresented in the ANS trays until this stater was acquired.[73] Several of Tanagura's coins with similar types survive; but this is an issue which eliminates the dotted border within the incuse. The coin has been struck over another Lycian issue. The partial reverse of the undertype, one turned leg of a triskeles and the right side of a dotted border, is visible on the Tanagura obverse. The leg of the triskeles shows through on the lion's body just beneath the wing, and next to it the dotted border runs obliquely down across the rump. Unfortunately,

[70] Naville 1, Pozzi Coll. 1920, 2751 (hereafter cited as *Pozzi*).

[71] Compare *BMCLycia* Thiban 41–43. However, because of the different lettering on some of these coins, as opposed to the name of Thiban written out in full on a tetrobol with similar types (*Traité* 2.2, no. 153), Babelon gives the staters to another, uncertain, dynast.

[72] In *Kuprlli*, p. 81, n. 104, fig. 5 on p. 79. See also, Ashmolean Museum, *Report of the Visitors* 1971–72, p. 41, pl. 16,7. Zahle is of the opinion that the triskeles on the tetrobol cited in n. 71, above, likewise ends in the three different heads described on the Pozzi reverse.

[73] It shares a rev. die with *Traité* 2, 2, no. 187; pl. 93,24.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

this overstrike is of no significance, since that part of the undertype which appears could belong to any number of dynasts, including Tanagura himself.

CADYANDA (?)

35. *Obv.*: Helmeted head of Athena r.
Rev.: Head of Hermes in winged petasus, l.; behind, diskeles and caduceus upright; within square incuse; ↓ΑΔPETEX↑ (Khadritime) or ↓ΑΔΑFTEX↑ (Khadavtime = Cadyanda).
Stater 8.21

This specimen is a duplicate of one in Paris.[74] The Kelley piece, therefore, does not solve conclusively the problem posed by Babelon; namely whether the legend should be read as a dynast's name, or as the name of Cadyanda, a city situated in the northwest of Lycia. The reading of the fourth and fifth letters is rendered difficult by their contiguity with the nose of Hermes. However, on the Paris specimen the second letter, off flan on our stater, and the fourth are formed and disposed in exactly the same way, making Α more likely than Ρ for the fourth letter. On the Kelley stater the three horizontal bars of the seventh letter, Ε, are clear; whereas the fifth letter is most probably F, for there is no indication whatsoever of a third, top bar.

Babelon favored the city name over that of a dynast "Khadritime," and we support this view. Cadyanda would fit well with the coin's relatively light weight, which according to Mørkholm[75] would locate the mint in western Lycia.

[74] *Traité* 2, 2, no. 415; pl. 101,11.

[75] O. Mørkholm presents the evidence for the geographic distribution of the different Lycian weight standards in "The Classification of Lycian Coins before Alexander the Great," *JNG* 14 (1964), pp. 69–72. He refers to this issue on p. 70, n. 21 in *Kuprlli*. City names are used elsewhere in Lycia at this time. Parallels are found, for example, on coins of Patara: *Traité* 2.2, nos. 416–19; pl. 101, 12–15.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

PAMPHYLIA

SIDE ca. 200 B.C.

36. *Obv.*: Helmeted head of Athena r.
Rev.: Winged Victory advancing l.; wreath in outstretched r. hand; in l. field, pomegranate above AΦ.
Drachm ↑ 4.17

These drachms of Side appear frequently; and this piece would not elicit comment except for the fact that the letter combination, AΦ, records a drachm issue not yet found elsewhere. This combination finds its counterpart on a tetradrachm which emerged in Münzen und Medaillen FPL 320, Feb. 1971, 20.

PISIDIA

SELGE

37. *Obv.*: Two wrestlers; between them, vase (?).
Rev.: Slinger r.; to l., KOIBA; to r., astragalos and ΣΤΛΕΓΕΥΣ retrograde.
Stater ↖ 10.76

Kelley bought into the Lycaonian hoard which was discovered in 1947–48 and published by Otto Mørkholm[76] some years later. Of the twenty staters acquired by Kelley three are of Aspendus, five are from the mint of Selge, and twelve are satrapal coins of Pharnabazus and Datames from the mint of Tarsus. Only no. 37, above, is a variant not in Mørkholm's publication of the hoard, and so is illustrated here.[77] Although struck from the same obverse die as Mørkholm's no. 192, it bears a slightly different legend in l. field on the reverse.

[76] O. Mørkholm, "A South Anatolian Coin Hoard," *Acta A* 30 (1959), pp. 184–201 (*IGCH* 1244).

[77] For comparisons with the other Kelley pieces from the hoard, see Mørkholm (above, n. 76), nos. 80, 106, 115, 185, 207, 222, 226, 231, 236, 249 (but Helmet C), 252, 260, 277, 305 and 308. See also Mørkholm (above, n. 76), no. 194 for a stater with a legend similar to our no. 37.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CILICIA

ISSUS ca. 380–375 B.C.

38. *Obv.*: Head of Athena, three-quarter facing l. in triple-crested helmet; within circular dotted border.
Rev.: Head of Heracles l., beardless.
Stater → 10.65 Overstruck. Countermarked.

Until the discovery of a Cilician hoard in 1947, partially published by E. S. G. Robinson,[78] this issue was unknown. The British Museum acquired one specimen from this hoard which Robinson published as unique.[79] The Kelley stater, purchased by him in 1948 and undoubtedly from the same deposit, became the second specimen known, and a duplicate of this coin has been in the collection of the ANS since 1968.[80] Although all three staters have been struck from the same obverse die, the head on the reverse of the BM piece faces right and the ethnic, absent on our two coins, is inscribed downward in right field.

Anyone with an astute eye and interest in the mint of Issus, whose output was small at best, might well remember seeing the Kelley stater several years ago. Immediately after Robinson had published his unique piece, Robert Kelley communicated his variety to Robinson with permission to publish, and this Robinson did immediately.[81] Discussion in the article centers around the two countermarks on the reverse. One is an eagle with an upright trident behind;[82] the other Robinson describes as a dolphin "somewhat double-struck." The second countermark, while indeed doublestruck, is not a dolphin, but an animal facing left, probably a horse, viewed upside down on the cheek of Heracles.

[78] E. S. G. Robinson, "Greek Coins Acquired by the British Museum, 1938–1948," *NC* 1948, pp. 43–59; *IGCH* 1261, which also includes subsequent published references to this hoard.

[79] Robinson (above, n. 78), p. 56, no. 9, pl. 5. See also, *British Museum Quarterly* 15 (1941–50), pl. 20,11.

[80] Previously, Hess & Leu Auction, 12–13 Apr. 1962, 323.

[81] E. S. G. Robinson, "A Stater of Issos," *NC* 1949, p. 114.

[82] This countermark Robinson believes might refer to the cult of Zenoposeidon, whose center lay at Mylasa in Caria; although he would look further east for the countermarking city itself. This counterstamp is found on a coin of Pharnabazus, *SNGvAulock* 5926. See note 84, below.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TARSUS

PHARNABAZUS ca. 385 (?) B.C.

39. *Obv.*: Head of Heracles in lion scalp, three-quarter facing r; in lower r., *Khilik* in Aramaic ("Cilicia"); within circular dotted border.
Rev.: Helmeted head of Ares, bearded, l.,; in front, [T]EPΣI-KON ([struck] "at Tarsus"); within circular dotted border.
Stater ↓ 10.26 Overstruck

40. *Obv.*: Head of Medusa, three-quarter facing l.; to l., dolphin (partially off flan); within circular dotted border.
Rev.: Helmeted head of Ares, bearded, l.; in front, KIΛIKION and *Khilik* in Aramaic; within circular dotted border.
Stater ↓ 10.48

Cilicia provided a center of embarkation from which Pharnabazus, Persian satrap of Dascylion, set out on his naval expeditions first against the Lacedaemoneans, 398–394 B.C., and then against Egypt, 391–389, and 379–374. The majority of his staters attributed to the mint of Tarsus bear the types of no. 40 above, but with the name of Pharnabazus inscribed in Aramaic before or behind the head of Ares; those bearing the Tersikon and Kilikion legends are far less common, and the head of Heracles occurs only on the Tersikon issue.[83] It is worth noting that to the five Tersikon staters with Heracles/Ares types known to this author, Kelley has added a sixth specimen, and all are struck from the same obverse die.[84]

[83] For the standard coins of Pharnabazus in his name, struck at Tarsus: *BMLycaonia*, pl. 29, 2–4. For a discussion of the two issues with the inscriptions of our nos. 39 and 40, see *Traité* 2.2, pp. 401–4.

[84] The other five specimens with head of Heracles are: *BMCLycaonia*, pl. 29,6; Robert Ball FPL 39, 1937, 615 = Bank Leu Auction, 9 May 1973, 263; ANS = Münzhandlung Basel, 15 Mar. 1938, 360; *SNGCop* Lycaonia-Cilicia 272; *SNG vAulock* 5926. One of the countermarks on this von Aulock coin is the eagle-trident stamp noted above, n. 82. The Tersikon legend is best preserved on the von Aulock and Kelley pieces. For other rare types with this legend see: Robinson (above, n. 78), pl. 5,11 (another example is in the ANS); *Traité* 2.2, nos. 1374, 1375, 1378; Jameson 3, no. 2398; *SNGvAulock* 5915; M. Thompson, "Some Noteworthy Greek Accessions," *ANSMN* 12 (1966), no. 14; Bank Leu Auction, 29–30 Apr. 1975, 285.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Likewise, five staters inscribed KIΛIKION have been recorded previously;[85] and the Kelley piece contributes a sixth example, the first of its kind to be incorporated in the ANS collection. In discussing the similar stater from the Cilician hoard (*IGCH* 1261), which the British Museum acquired in the early 1950s, K. Jenkins considered this issue the prototype of the more common coins of the same type, but with the name of Pharnabazus,[86] a judgment based on the wear in the hoard and on the superior execution by the Kilikion engraver. He also believed that the coin was struck from dies other than those employed for the Hunterian and Paris specimens. To this writer all six coins appear to share the same obverse die.

CYPRUS

UNCERTAIN MINT — Late sixth or early fifth century B.C.

41. *Obv.*: Man-headed bull kneeling r., head reverted; above, traces of ϱ (*ϱο*) and 𐤔 (*σι*); in exergue, 𐤔 (*σε*) and Θ (*μο*).
Rev.: Astragalos; to l., 𐤔 (*σι*); to r., ‡ (*πα* or *βα*); all in shallow incuse circle.
Stater 11.08

Our coin is the fifth known of this rare issue, all struck from the same obverse die.[87] On one or another of the previously known coins, all

[85] *Hunter* 2, p. 546, no. 5, pl. 60, 8; *Traité* 2.2, nos. 588, 589 (formerly *Waddington* no. 4564, pl. 11, 25); pl. 108, 6, 7, both now in Paris; *Pozzi* 2847 = Naville 14, Spencer-Churchill, et. al. (1929), 405 = *Jameson* 4, 2603; G. K. Jenkins, "Greek Coins Recently Acquired by the B.M.," *NC* 1955, p. 142, no. 17, from the Cilician hoard already cited (*IGCH* 1261).

[86] The more common issues have been dated by Babelon (*Traité* 2.2, p. 401) to the second naval expedition against Egypt, 379–374 B.C., chiefly because of their close resemblance to coins of his successor, Datames.

[87] A similar but indistinct coin is at the Bibliothèque Nationale in Paris (*BMC Cyprus*, pl. 21, 1); it affords no help and will not be further discussed. The four coins of our issue are listed here: 1. London (*BMCCyprus* Paphos 1, from our reverse die), whose obverse 𐤔 is clear; 2. ANS (*Weber* 7701 = *Jameson* 4, 2334 = *BMCCyprus*,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

obverse symbols except that to right in the exergue are legible, and this symbol has been deduced to be the ⓘ which our coin now clearly bears.[88] The obverse inscription is thus beyond question.

To turn briefly to the reverses: the three reverse dies known all have ‡ (*πα* or *βα*) to right. One has nothing to left, one an ankh, and one (from which our coin and one other were struck) has 𐤔 (*σι*) to left. The ‡, always present, must be the first syllable of the reverse legend, and all expansions suggested so far read from right to left.[89]

One would then expect that the obverse inscription should be read in the same direction and, reading from right to left above and below, one reads *Σι-ρο-μο-σε*, or the name *Σίρωμος*. Remarkably, A. J. Seltman[90] some time ago suggested this name, working only from the two poorly-preserved specimens published in the *BMC*; subsequent discoveries have now proven his conjecture correct. Siromos is indeed known as a Cypriot king: he appears in Herodotus's Salaminian genealogy[91] as son of Euelthon of Salamis and grandfather of Gorgos, king just after 500. Euelthon's reign extended until perhaps 530 B.C. or later, and one might easily assign our coin to Siromos at Salamis—except that it cannot possibly be fitted into the long series of Salaminian coins with unvarying obverse type of recumbent ram struck by Euelthon and his successors throughout nearly all of the fifth century.

The original attribution of our issue to Paphos was based on a misreading of the obverse legend. Yet, as O. Masson has recently argued, the man-headed bull on the obverse, clearly a river-god, seems to point to Paphos, situated near a considerable river.[92] And the astragalos, which often occurs as symbol on later Paphian issues, is surely appropriate to that city's chief deity, Aphrodite.

---

pl. 21, 2); 3. Nicosia (O. Masson, "Notes de numismatique chypriote," *OpuscAthen* 8 (1968), p. 114, a; 4. H. A. Troxell and W. F. Spengler, "A Hoard of Early Greek Coins from Afghanistan," *ANSMN* 15 (1969), pp. 6–7 and 12–14, no. 18; whose obverse 𐤀 and 𐤔 are clear.

[88] Troxell-Spengler (above, n. 87), p. 13.

[89] *Βασί(λεως)*, *Πασι...* (name of unknown king), and *Βα(σίλεως) Σι(ρώμου)*: in one or another of the publications cited in note 87.

[90] A. J. Seltman "Some Cypriote Coins," *NC* 1964, p. 78.

[91] Hdt. 5.104

[92] Masson (above, n. 87), p. 112.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Although not accepting Seltman's conjectural reading of Siromos, Masson prefers to date our issue to the late sixth rather than to the early fifth century[93]—just when Siromos's reign would have fallen. Can it be that he ruled, if briefly, also at Paphos? Perhaps more probable, however, is the supposition that another Siromos struck our coin; many royal names occur at more than one Cypriot city.

CYPRUS UNCERTAIN ca. 480–475 B.C.

42. *Obv.*: Ram walking l.; in front, remains of letter 𐠎; all within circular dotted border.
Rev.: Dolphin l.; below, rosette; above, crescent; all within square incuse with dotted border.
Stater ← 10.645

43. *Obv.*: Ram walking l.; in front, no certain lettering visible; all within circular dotted border; obv. die of 42, above.
Rev.: "Club and branch" within square incuse with dotted border.
Stater ↑ 10.935 Obv. die worn

In 1895 J. P. Six published among a group of Greek coins two specimens then in his collection which he tentatively attributed to Magarsos or Mallos in Cilicia.[94] Both obverses show a ram walking left, with the sign 𐠎, in front, within a circular dotted border. On the reverse of his no. 1 appears a dolphin l. between a rosette and a crescent,[95] all within a square incuse with dotted border, as our no. 42. The reverse of his no. 2 (Plate 5, E)[96] bears within a similar incuse a motif that he describes

[93] Masson (above, n. 87), p. 111, referring to his *Les inscriptions chypriotes syllabiques* (Paris, 1961), p. 117.

[94] J. P. Six, "Monnaies grecques inédites et incertaines," *NC* 1895, p. 197, nos. 1 and 2, pl. 7, 16, 17.

[95] Another specimen struck from the same obverse but from a different reverse die is in Paris (*Traité* 2.2, no. 992, pl. 28,14). The Paris specimen was first published in a line drawing by H. de Luynes, *Numismatique et inscriptions cypriotes* (Paris, 1852), no. 7, pl. 7, who suggests Cyprus as the origin. Babelon, while considering a Cypriote mint and citing others' suggestions for Caria and Pamphylia, gives the issue to uncertain Asia Minor. Six published his coin, first in "Zur Münzkunde Pisidiens und angrenzender Länder," *ZNum* 1879, p. 80, pl. 3,7

[96] Now in the coin cabinet at The Hague. The photographs were kindly supplied by Dr. J. P. A. van der Vin.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

as "club and branch," as our no. 43. Although not noted by Six, both coins were struck from an identical obverse die—no. 1 before recutting, and no. 2 after an ankh sign had been engraved sideways above the ram's back.

Among the coins acquired by the British Museum between 1938 and 1948, published by E. S. G. Robinson,[97] appears a stater which he states is struck from a similar although not identical reengraved obverse die. To the BM specimen, too, an ankh symbol has been added, but upright above the ram's back; and beneath the belly the Cypriote character, 𐠓, (ra) has been inscribed. The reverse type, analogous to Six's no. 2 but less delicately conceived, consists of branch with bud at tip and two leaves enclosing a pair of berries. The ANS collection contains two duplicates of this coin, one of which is overstruck on a coin of S. Atlan's group 2 from Side, dated 479–470 B.C.[98] The signary on this issue, as pointed out by Robinson, should prove a Cypriote origin for the examples known to Six.

Kelley no. 42, above, has added a third specimen to the dolphin series; and Kelley no. 43 provides a helpful chronological transition from Six's dolphin issue to his club and branch reverse. Not only does Kelley no. 43 share an obverse die with Six's nos. 1 and 2, as well as a reverse with Six's no. 2; but also, both of Kelley's coins were struck before the ankh was added to the obverse die. Moreover, the sequence of the second and third issues can be firmly established. Contrary to Robinson's thoughts at the time, the same obverse die was carried over to his "branch and berries" issue (and to its two duplicates at the ANS), after having been reworked yet a second time. The ankh symbol has now been engraved in upright position over the ankh cut horizontally during the first reengraving. The end of the vertical bar of the original ankh can be faintly seen extending out over the ram's neck.[99]

[97] Robinson (above, n. 78), no. 5, pl. 5,5. See also, C. M. Kraay, "Notes on the Mint of Side in the Fifth Century, B.C.," *NC* 1969, no. 9, pl. 16,4.

[98] S. Atlan, "Untersuchungen uber die Sidetischen Münzen des V und IV Jahrhunderts v. Chr.," *Türk Tarih Kurumu Yayinlarindan*, 5th ser., no. 23 (Ankara, 1967), p. 64, no. 9 (Ö8-A7). See discussion by Kraay (above, n. 97), no. 9; also *Asyut*, no. 775. The ANS overstrike is published by Kraay (above, n. 97), pl. 16, 3, and in *Asyut*, pl. 32, O. For the clear ANS specimen see *Asyut*, pl. 32, N.

[99] As in Kraay (above, n. 97), pl. 16, 3.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Altogether, for the three related issues, there are now ten examples known, all struck from the same obverse die.[100] The following table charts the progressive strikings of these ten coins. The obverse die linkage is indicated by the solid join lines to the left, the reverse linkage by those to the right.

Coin		*Collection*	*Remarks*
	ISSUE 1		
	"Dolphin" reverse		
1	Six, no. 1		
2	Plate 5, C	Oxford	
3	*Traité* 1. 2, no. 992, pl. 28,14	Paris	obv. die break from middle of ram's back
4	Kelley no. 42	New York	" " "
	ISSUE 2		
	"Club and branch" reverse		
5	Plate 5, D	Oxford	" " "
6	Kelley, no. 43	New York	" " "
7	Six, no. 2 (Plate 5, E)	The Hague	ankh sideways (first recut over diebreak)
	ISSUE 3		
	"Branch with berries" reverse		
8	Robinson, no. 5	London	ankh upright; below, ∇ (second recut)
9	*Asyut*, pl. 32, N (Plate 5, F)	New York	" " "
10	*Asyut*, pl. 32,0	New York	" " " (overstruck on Side)

[100] The 9th and 10th specimens, in the Ashmolean Museum, have only recently come to our attention. They are published here for the first time, courtesy of Colin M. Kraay. One (Plate 5, C) is a duplicate of the Paris "dolphin" and Kelley no. 42; the other (Plate 5, D) is a duplicate of Six (above, n. 94), no. 2 and Kelley no. 43, representing the "club and branch" issue.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Thus, for ten coins and three issues we have one obverse die and four reverses. This is the extraordinary story of the life of one obverse die. We find it first in Issue 1, when it is relatively fresh (Six, no. 1 and the Oxford piece). Upon our next encounter (with the Paris specimen and Kelley, no. 42), it already shows definite signs of age. It then progresses rapidly from a much-used to a decrepit stage of wear in Issues 2 and 3.

With regard to the minting city and the question of absolute chronology, the answer to the latter is perhaps within closer reach. The dates (479–470) for Atlan's group 2 at Side, over which our last Cypriote issue was struck, appear confirmed by the contents of the Asyut hoard.[101] If so, they provide a terminus post quem for the Cypriote overstrike. Babelon[102] suggested that the first, "dolphin," issue was struck "probably a little after 480."

One continues to wonder where the mint was located,[103] and why it was so abstemious in its use of new obverse dies. The answer may lie eventually in the mint's identity, and possibly in its relations with Side which at this time lay within the Persian satrapy of western Asia Minor.

SELEUCUS I

44. *Obv.*: Head of Seleucus (or Alexander) r., wearing panther-skin helmet adorned with bull's horn and ear.

Rev.: ΒΑΣΙΛΕΩΣ ΣΕΛΕΥΚΟΥ Victory r., crowning trophy; to l., ; to r., .

AR Diobol ↖ 1.25

The Persepolis issue to which this piece belongs is recorded by Newell in tetradrachm and drachm denominations (*ESM* 424–25). Kelley's smaller fraction[104] is significant as another example of an excessively rare denomination in the early Seleucid series. The only diobol emission

[101] See *Asyut*, no. 775.

[102] *Traité* 1.2, p. 632.

[103] The animal style brings to mind the recumbent ram of Salamis. However, for this period that mint seems amply covered by its distinctive "Euelthon" coinage. See *Asyut*, nos. 787–808.

[104] Purchased in the Hess-Leu auction of 16 Apr. 1964, 232.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of standard type known to Newell was produced at Ecbatana under Seleucus II (*ESM* 562).[105]

ANTIOCHUS I

45. *Obv.*: Head of Heracles r.
Rev.: ΒΑΣΙΛΕΩΣΑΝΤΙΟΧΟΥ (beginning in exergue and running upward r. in a continuous curve). Zeus *aetophoros* l.; to l., Δ; below throne, Μ.
Æ Tetradrachm ↑ 15.65

Our coin, a die duplicate of *ESM* 755, was struck at an uncertain eastern mint according to Newell, who cites the evidence of style, fabric, and a general similarity to issues of Ecbatana. A clue to a more specific mint attribution is provided by a recent accession from another source (Plate 5, G), a hemidrachm of Antiochus I with the same types as the tetradrachm and the same monogram in the left field. On the fraction the monogram below the throne is obscure but seems to be ΜΝ. Of special import is the identical manner in which the inscription is rendered: ΒΑΣΙΛΕΩΣ starting in the exergue and continuing around with the final Σ immediately preceding the ΑΝΤΙΟΧΟΥ inscribed upward to the right of Zeus. Nowhere else in the Seleucid series does one find this peculiar arrangement of title and name; clearly the two coins are from the same mint.

Although there is no provenance associated with the known tetradrachms, the hemidrachm came from Afghanistan and the findspot assumes added importance in that it involves a coin of small denomination, less likely than a tetradrachm to travel far from its place of origin. Certainly Newell was right in attributing the coinage to an eastern mint. That the mint was located in Bactria is now highly probable.

It is difficult, however, to accommodate the coins at Bactra, the only Bactrian mint that Newell postulates. No money of either Seleucus I or Antiochus I with Alexander types are assigned to Bactra and the characteristic Bactran marking of *delta* in circle indicates an unbroken sequence of strikings, carrying over from the elephant quadriga coinage

[105] A fractional lion stater from Susa, weighing 1.57 grams, is described as a diobol or light triobol (*ESM* 320).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of Seleucus I to the issues with head of Antiochus I and horned horse's head reverse. The style of our tetradrachms and drachm seems cruder than that of the Bactran issues, and the die relationships of the two groups reveal differences in mint practice. At Bactra under Seleucus and Antiochus I, Newell records an almost invariable six o' clock position with occasional deviation toward seven or five o'clock;[106] the dies of the Δ coins are related at twelve o'clock or thereabouts in the case of the two tetradrachms and at nine o'clock in that of the single drachm.

In publishing a large hoard of Hellenistic silver found in the excavations of AI Khanoum, Mme Petitot suggests the possibility that a mint was in operation there,[107] a possibility greatly strengthened by the discovery of bronze flans at the site.[108] This was evidently a flourishing metropolis under the early Seleucid and Bactrian rulers, but pending further data it can only be considered one of several places in the general area which might have minted our coins.

ANTIOCHUS II

46. *Obv.*: Head of Antiochus I r.
Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ Apollo seated l. on omphalos; no symbol or monogram.
Æ Tetradrachm ↑ 16.75

47. *Obv.*: Head of Antiochus II r.
Rev.: Type as above; to inner l., ΙΣ; in exergue, ΘΑΡ over ΣΩ.
Æ Tetradrachm ↑ 16.96

These tetradrachms are additions to the scanty coinage of Antiochus II at Lampsacus as established by Newell. The obverse die of no. 46 is very close[109] to that of *WSM* 1538 and the absence of reverse markings suggests that this was the first Seleucid issue at that Hellespontine mint.[110] A logical sequence thereafter would be *WSM* 1538, 1537 and 1536.

[106] There are two exceptions, both showing a twelve o'clock position: a hemidrachm of Seleucus I (*ESM* 669) and a tetradrachm of Antiochus I (*ESM* 686).

[107] C.- Y. Petitot-Biehler, "Trésor d'AI Khanoum," *RN* 1975, p. 56.

[108] P. Bernard, "Fouilles d'AI Khanoum," *CRAI* 1969, pp. 354–55.

[109] It may indeed be identical; the reproduction in *WSM* is not very clear.

[110] Newell (*WSM*, p. 319) states, "We possess at present no coins, either of Seleucus I or Antiochus I, which could with any plausibility be assigned to Lampsacus."

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

If no. 46 is the first Lampsacene striking of Antiochus II, no. 47 is presumably the last. Again there is a near-identity of obverse dies with a published coin (*WSM* 1540). On that piece ΣΩ A appears in the exergue; on the Kelley specimen the reverse die originally had the same reading. Subsequently ΘAP was cut over ΣΩ and the A to the far right was deleted.

SELEUCUS III

48. *Obv.*: Head of Seleucus III r.
Rev.: ΒΑΣΙΛΕΩΣ ΣΕΛΕΥΚΟΥ Apollo seated l. on omphalos; to outer l.,  above rose; to outer r.,  .
AR Tetradrachm ↑ 16.66

ANTIOCHUS III

49. *Obv.*: Head of Antiochus III r.
Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ Apollo seated l. on omphalos; to outer l., bow in gorytus; in exergue, ΑΣ.
AR Tetradrachm ↑ 16.25

Two coins from the Antioch mint add new die combinations to Newell's record, with the result that the sequence of strikings would be altered to a minor degree. The obverse die of no. 48 is that of *WSM* 1024–26 while the reverse variety is *WSM* 1030, suggesting that 1024–26 and 1029–30 belong together. Reverses of all five issues have the control in common.

Similarly no. 49, a variant of *WSM* 1101 with ΑΣ instead of ΑΣΚ or ΑCΚ in the exergue, is linked by an identical obverse with *WSM* 1096b, which used the die at an earlier stage.

ANTIOCHUS IV

50. *Obv.*: Head of Antiochus IV r.; to l.,  .
Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ ΘΕΟΥ ΕΠΙΦΑΝΟΥΣ ΝΙΚΗΦΟΡΟΥ Zeus *Nikephoros* l.; to l., palm branch (off flan); in exergue,  .
AR Tetradrachm ↑ 17.11

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Brett[111] does not include this obverse die in her study of the coinage of Ake-Ptolemais although it was used for a Newell coin (formerly de Sartiges 491) with ΜΙ in the exergue. The combination of monograms is also new to Brett; she lists issues with ΑΗΡ and ΑΑΣ. Another issue has ΑΓ alone in the exergue.

ALEXANDER I BALA

51. *Obv.*: Head of Alexander r.
Rev.: ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ ΘΕΟΠΑΤΟΡΟΣ ΕΥΕΡΓΕΤΟΥ Zeus *Nikephoros* l.; to inner l., Π cut over Κ; in exergue, ΣΞΡ Φ.
Æ Tetradrachm ↑ 16.52

This tetradrachm, dated 147/146 B.C., is to be incorporated into Newell's Antiochene series of Alexander issues (nos. 157–61).[112] The Π cut over the familiar Κ in the left field was not known to Newell when he published his study, nor was the Φ appendage to the date although subsequently he obtained a specimen with the same exergual markings. The Alexander head seems to be the recut stage of an obverse used in the preceding year (Newell no. 151).

ANTIOCHUS VIII

52. *Obv.*: Head of Antiochus r.
Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ ΕΠΙΦΑΝΟΥΣ Zeus *Nikephoros* l; to outer l., Α over A; below throne, A.
Æ Tetradrachm ↑ 16.15

53. *Obv.*: Head of Antiochus r.
Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ ΕΠΙΦΑΝΟΥΣ Athena *Nikephoros* l., holding spear and shield; to outer l., branch; in exergue, Α⊓ ΑΡ.
Æ Tetradrachm ↑ 16.56

[111] A. B. Brett, "Seleucid Coins of Ake-Ptolemais in Phoenicia," *ANSMN* 1 (1945), pp. 17–35.
[112] E. T. Newell, "The Seleucid Mint of Antioch," *AJN* 51 (1917), pp. 49–50.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

In his study of the coinage of Antiochus VIII at Antioch, Newell divides the issues of the third and fourth reigns by reverse types and monetary magistrates.[113] During his third occupation of the city (111–109 B.C.) Antiochus struck tetradrachms showing Zeus *Ouranios* standing left with ⅄ over A to the extreme left and various subsidiary letters in the right field; when he recaptured Antioch in 108 B.C., the king changed the type of the large silver to a seated Zeus *Nikephoros* with Ɛ / A replacing ⅄ / A in the left field. This neat division of issues is unfortunately no longer tenable.

Shortly after *The Seleucid Mint of Antioch* appeared, Newell acquired a tetradrachm with the Zeus *Ouranios* type and A over EP in the left field. This suggested that the first issue of Antiochus' fourth reign continued the type of his earlier money at Antioch under the control of the new supervisor (A/EP= Ɛ /A). The Kelley coin, no. 52 above, adds a further complication in that the magistrate supervising the new Zeus *Nikephoros* issue is the man who controlled the earlier Antioch issue with Zeus *Ouranios* type. Either the two types were being struck concurrently at the end of Antiochus's third reign and the beginning of his fourth, or, less likely, there was an overlapping of supervisory control during those periods.

No. 53 belongs to a coinage which has been tentatively attributed to Seleuceia ad Calycadnum by Imhoof[114] and more definitely to Elaeusa Sebaste by Bellinger.[115] Whatever the exact origin of the series, the Kelley piece is of interest in adding a new issue, with A ⊓ AP in the exergue, to the slim record of tetradrachms produced for Antiochus VIII at this Cilician mint.

[113] Newell (above, n. 112), pp. 99–100, 105–6.

[114] *KlMünz* 2, p. 482, no. 7.

[115] A. R. Bellinger, "A Seleucid Mint at Elaeusa Sebaste," *ANSMN* 3 (1948), pp. 27–30.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

A PTOLEMAIC HOARD OF "ATHENA" TETRADRACHMS AT ANS

(PLATE 7)

ORESTES H. ZERVOS

In an undated and unpublished essay titled "The Egyptian Coinages of Ptolemy I," kept at the ANS, E. T. Newell states: "In November 1912 a parcel of thirty-four tetradrachms of the Athena type were sent to the writer from Egypt, together with the statement that these coins had all come from a recent find."[1] In a separate set of notes he indicates that the lot came from Hassan Abd-el-Salam, a Cairo dealer, and in an attached inventory he identifies each variety. Thirty-one of these coins are now to be found in the trays of the ANS (*IGCH* 1675). While the surfaces—somewhat dull and lusterless—and the generally good preservation of the tetradrachms confirm the report of their common origin, the lack of further information makes it difficult to determine from which "recent find" they came. The coins could hardly constitute a remainder of the similar but much larger Delta hoard of 1896, recently published by this writer,[2] since their appearances differ considerably and they contain certain late varieties (see Cat. 25–29, below) conspiciously absent from the earlier hoard.

Nor is it likely that they were part of any of the three Toukh-el-Garmous hoards of 1905-6 for these, imperfectly recorded as they are, can be shown to be distinct deposits. This can be verified from C. C. Edgar's excavation

[1] The archaistic "Athena" depicted on the reverse of these coins is variously designated as Promachos, Alkidemos, etc., but is probably to be understood more accurately (if more broadly) as a Palladion of the striding variety such as is often seen in Greek sculpture and vase painting.

[2] O. H. Zervos, "The Delta Hoard of Ptolemaic Alexanders, 1896," *ANSMN* 21 (1976), pp. 37-58. *IGCH* 1671.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

report.[3] The hoard discovered first (*IGCH* 1680), and the most famous of the three, is the easiest to eliminate as, according to Edgar's account, it contained gold pentadrachms of the Eagle type and its only silver coins were apparently tetradrachms of the same type rather than the Athena variety. The second one (*IGCH* 1729) is probably also a distinct find, although that fact is more implied than stated: "A small hoard of silver tetradrachms . . . in poor condition though not uncleanable." If Edgar's silence on the coin types stems not from the latter's invisibility under layers of incrustation but from their similarity to the types in the earlier find, it may be presumed that these tetradrachms were of the ordinary Eagle kind. But their deteriorated state, regardless of types, shows that they were differently affected by ground salts than our own, which is even stronger proof that the two groups are unrelated. The third accumulation (*IGCH* 1679) is more akin to our collection: "An earthen ware pot, standing in the middle of the room . . . packed full of silver coins amid which lay a glittering group of small gold ornaments. The coins inside the pot were much better preserved than those found previously [*IGCH* 1729]. They are of various kinds, and many of them do not belong to the Ptolemaic series proper. Indeed portraits of Ptolemy Soter are quite rare in this group, and most of the types are earlier, the head of Alexander in elephant-cap being one of the commonest." But again, this is most likely an unrelated find, for the Athena pieces in it, though preponderant (and well-preserved), are clearly *not* the only types present. It should be remarked, incidentally, that not all Toukh-el-Garmous hoards were discovered in 1905 as stated in *IGCH*; the spectacular find with the gold pentadrachms was (August 1905), but the second and third hoards came to light, as Edgar's narrative makes clear, early in the following year (April 1906). This takes care of all three Toukh-el-Garmous finds.

Another presumed contemporary is a questionable find described by Svoronos as "colossal" and as containing "silver tetradrachms of Ptolemy Soter inscribed ΑΛΕΞΑΝΔΡΟΥ and bearing the types of Athena Pro-

[3] C. C. Edgar, "Report on the Excavations at Toukh-el-Qaramous," *Annales du Service des Antiquités de l'Egypte*, 7 (Cairo, 1906), pp. 205-12, esp. p. 208; the following discussion of Edgar's work can be found on pp. 205-8.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

machos."[4] The author says nothing more about this alleged find, but one gathers from the time in which the passage appeared (1908) and from the context of the paragraph containing it (where Svoronos describes material he examined after publication of parts 1-3 of his Corpus in 1904) that the time of discovery would be between 1904 and 1908. But that hoard, as described, seems never to have existed, and it is likely that Svoronos invented it by compounding two separate finds into one. The innocent constituents of this mix-up seem to be, on the one hand, the already-mentioned Delta hoard of 1896 which is reported to have contained anywhere from 1,000 to over 2,000 Athena tetradrachms and, on the other hand, a second huge hoard unearthed at Abu Hommos in 1905 or shortly before (*IGCH* 1726), knowledge of which consists of J. Eddé's terse statement that it contained "2800 tetradr. des Ptolemées."[5] The great size which the two finds have in common is very likely the cause of the misapprehension, one which produced a composite having the contents of the first and the discovery date of the second hoard. That Svoronos's find is fictitious is moreover suggested by the fact that, to this writer's knowledge, there is no mention in all the literature of any such discovery, which would be strange (though not impossible) for a find of such large proportions. Also, a survey of Athena tetradrachms surviving in private and public collections[6] has resulted in a body of coinage whose size (just under 1,600 pieces for the debased-weight variety only) while generally tallying with the average numbers attributed to the 1896 Delta find and other lesser ones, makes it very improbable that a second "colossal" find of satrapal tetradrachms ever came to light.

But Svoronos himself seems to provide a clue to this mystery hoard by the inclusion of 491 Eagle-type tetradrachms of Ptolemies I and II in his catalogue supplement of 1908 identified there as coming from an "Egyptian find"[7] but which are otherwise not mentioned at all in

[4] J. Svoronos, *Ta nomismata tou kratous ton Ptolemaion* (Athens, 1904-8), pt. 4, p. xiii (cited hereafter as *Ptolemies*), author's translation.

[5] J. Eddé, "Les trouvailles des trésors monétaires en Egypte," *Bollettino di Numismatica e di Arte della Medaglia*, 3 (Milan, 1905), pp. 128-29, 140-43, esp. p. 129.

[6] O. H. Zervos, "The Alexander Mint of Egypt" (Ph. D. diss., New York University, 1974).

[7] *Ptolemies* 4, p. 404-9.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

his text. The editors of *IGCH* (who enter only 458 pieces) suggest the possibility that this "Egyptian find" (no. 1677) and the noted Abu Hommos hoard pertain to one and the same discovery; in the light of what has been mentioned here, it appears that their conjecture is a sound one. With the elimination of Svoronos's imaginary find, there remains no record of other possible hoards from which our's may have derived. Later discoveries may reveal the parentage of our coins and thus bring us closer to the "recent find" mentioned by Newell; until then, the parcel of 34 coins here discussed is the only certainty we have about the hoard.

As for the localization of our hoard, the most probable area would be the wide plain of the Nile Delta where early Hellenistic silver deposits are generally found. The situation with the gold is less clear, as there are on record only two important gold hoards from the early period: one, also containing silver, from Abusir in the southern extremity of the Delta (*IGCH* 1672), and another from Asyut (*IGCH* 1673), in Upper Egypt. Both are inadequately recorded however and their burial has been vaguely set at 325-300 B.C. But in any case, the concentration of silver hoards in the north which strongly contrasts their practical absence from the more southerly regions is a striking fact, probably to be understood by the resistance Egypt had traditionally shown to the use of coin *as* coin, a mistrust which apparently still survived in Upper Egypt but which the newly Hellenized Delta had finally overcome. The circulation of coins in pre-Hellenistic Egypt was of course not unknown, but the bulk of such coins—imported—was used as bullion, and generally after their metal had been tested for purity by means of deep cuts and gashes.

It is interesting to note that the only known important "Alexander" hoard from the south, one discovered at Kuft (ancient Koptos) in the 1870s, stands out from all other early finds for the unprecedented number of countermarks found on its coins (3 marks per coin on the average).[8] Most of our tetradrachms are, on the other hand, plain and those that are not, bear on the average fewer, shallower and differently-shaped marks than the Kuft pieces. In number of countermarks, our lot resembles finds known to have come from the north. It is particularly close

[8] *IGCH* 1670 and see Zervos (above n. 2), pp. 51-52 and n. 23.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

in this respect to the earlier mentioned Delta find of 1896 whose ratio of countermarks to the total number of pieces contained (59/148) is only slightly lower to that of the present hoard (16/31). Hence there is no cogent reason why, on the basis of geographic distribution and incidence of punchmarked coins, one might not place the present hoard in the general region of the Nile Delta.

The legend on the tetradrachms is the same throughout, ΑΛΕΞΑΝΔΡΟΥ, and is therefore omitted from the Catalogue. The coins are numbered consecutively and each variety is identified by its control combinations as well as by reference to its number in Svoronos's *Ptolemies*. The circulation wear of the coins is given as W1 (practically uncirculated) to W4 (worn smooth). Illustrated coins are marked by an asterisk (*).

CATALOGUE

Cat.	*Variety*	*Svoronos No.*	*Weight Range* (g)	*Circulation Wear*
		1. REGULAR ISSUE		
		Early Plain Series (ca. 312–304 B.C.)		
1–2		146 (ANS 1 sp.)	15.59	W2
* 3		108	(damaged)	W2
		Helmet Series (ca. 312–304 B.C.)		
4–8	Helmet	168	15.66–15.47	W1–W2
*9–12	Helmet	170	15.64–15.45	W2
13	Helmet, Star	174	15.64	W2
14–20	Helmet	162 (ANS 1 sp.)	15.72–15.66	W2
*21–24	Helmet	164	15.82–15.19	W1
		Late Plain Series (ca. 304–301 B.C.)		
25		127	(damaged)	W1–W2 (?)
26		113	15.76	
* 27		148	15.66	
28		118	15.68	
* 29	(style A3c)	125	(damaged)	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Cat.	Variety	Svoronos No.	Weight Range (g)	Circulation Wear
		2. SPECIAL ISSUE (ca. 312–304 B.C.)		
*30–32	A	107	15.62–15.12	W1–W4
* 33	A Δ I	141–42	15.21	W2
34	A Bee	153 (not ANS)	—	—

COMMENTARY

NOTE ON CLASSIFICATION

The ordering of the hoard in the inventory above is based on findings made by this writer over the past ten years while studying the satrapal issues of Ptolemy I. In particular, the findings that apply to the Athena tetradrachms of debased weight are condensed below from the article on the Delta hoard of 1896 with some additions. A basic feature in this classification is the division of the Athena coinage into two broad categories, the Regular Issue and the Special Issue, and the further subdivision of these into smaller groupings or series. Thus the Regular Issue (serviced by die-cutter A) consists of the Plain-letter-control Series (early and late) and the much larger Helmet Series, while the other issue (mainly serviced by artists B and C) consists of three medium-sized groups each characterized by a distinct primary control. Also basic is the fact that the various series, all present in our hoard, are by and large parallel to one another rather than consecutive groupings.

The bulk of these coins was emitted from about 312-310 B.C. to the time of Ptolemy's coronation in late 305 or in 304 B.C., that is, during the interval when the minting of gold was suspended. At the end of this period all coin series, save one, came to an end. The sole survivor was the Plain Series of the Regular Issue which continued to be struck in its usual format. Significantly, these late tetradrachms were accompanied from the very start by a new series gold staters with new types and legend (Ptolemy I head/Elephant quadriga, with ΠΤΟΛΕΜΑΙΟΥ ΒΑΣΙΛΕΩΣ). This final section of the silver, termed Late Plain Group, was briefly discussed in the article on the 1896 hoard (though itself absent from that find) and is further considered here.

The control varieties in this final group are quite numerous though each represents a small emission; five are contained in this hoard sample

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

(Cat. 25–29) and several more are brought together by G. K. Jenkins under the rubric *Group (g)*.[9] These varieties are as a whole difficult to order, but three of them—one in the hoard, Cat. 29—can be shown on grounds of style to belong to the very end of the group. The other two are listed by Jenkins as Svoronos nos. 104 and 109 (but this one in a different group). The latest stylistic stage of the "regular" tetradrachms in the Delta hoard of 1896 (based as always on the design of the obverse, hair locks, etc.) was designated A3(b) in my article on that find. The stage of the present variety Cat. 29 exhibits further development of style (Plate 7, 29) and can be classified as A3(c). As there is no further development of style on record, it can be held as certain that emission Cat. 29 and its two companions which incorporate it must include the latest Athena tetradrachms struck by the Egyptian mint. Thus our coin parcel covers the entire span of the reduced-weight silver; it contains both the part represented in the 1896 find (which makes up the bulk of that coinage) as well as the small Late Group of tetradrachms with which the satrapal issue comes to an end.

HOARD COMPOSITION

Because of the coin parcel's range, one would expect it to contain all major reduced-weight varieties down to the coinage's end. It does for the most part, but there are two conspicuous exceptions—emissions marked ΔΙ with Helmet, and 𐤉 𐤊. Both emissions are well represented in the 1896 find as well, in fact, as nos. 1, 4, 9 and 21 of our inventory, and one would therefore expect them, like the latter, also to be present here. That this is not so cannot simply mean that the two emissions came late, for both of them, as just indicated, are present in the earlier find of 1896 and hence must actually be dated before the Late Plain Series tetradrachms.

It appears that each lacuna has to some extent its own explanation. To begin with emission 𐤉 𐤊, the most serious of the two gaps, this might be connected with a pattern of wider imbalance observable among the coins in the parcel. The following chart compares the statistics of our hoard with those of the 1896 find:

[9] G. K. Jenkins, "An Early Ptolemaic Hoard from Phacous," *ANSMN* 9 (1960), pp. 34-35.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Coinage	*1912*	*1896* [a]
REGULAR ISSUE		
Early Plain Series	3	25
Helmet Series	21	89
Late Plain Series	5	—
SPECIAL ISSUE		
Series with	3	11
Series with	1	15
Series with	1	18
	34	158

[a] The totals of the 1896 find have here been augmented to accomodate 10 new pieces in Berlin (Staatliche Museen) not included in the published inventory. The coins, which fill several gaps in that record, are here identified as to variety by the catalogue numbers used in *ANSMN* 21 (1976), pp. 43-45, and are further described by their weights, occasional countermarks and, where necessary, by their stylistic stage (in notation). They are as follows: no. 1 (15.64, ctmk.; A2, unrepresented), no. — (15.63; A1; *new* variety to follow no. 3, as Svoronos no. 154), no. 15 (15.69), no. 23 (15.59), no. 107 (15.68), no. — (15.74; A3b; *new* variety to follow no. 107, as Svoronos no. 176), no. 109 (15.65; B3), no. 119 (15.57, ctmk.; B1, unrepresented), and no. 121 (15.69 with ctmk., 15.62; B3). Dr. H.-D. Schultz of the Berlin Museum kindly informs me that these tetradrachms were purchased in a single lot by Löbbecke (accession 7993) in about 1900 and that they apparently came from a "hoard" consignment owned by the Egger Brothers. The varieties involved, the exceptional condition of the coins, the high weights and gradation of the same, and further, the date of purchase of the lot, and the fact that the Egger house is known to have acquired part of the 1896 hoard (lot sold to the Vienna Cabinet in 1897), all leave little doubt as to the true origin of these additional pieces.

The above sets of figures show that both the Early Plain Series (3 pieces) and the various series of the Special Issue (5 pieces) are underrepresented with respect to the large Helmet Series, for instead of an expected 15 they contain only 8 pieces. Significantly, however, these deviations are largely canceled out by an overrepresentation of the coins in the Late Plain Series (5 pieces). The exaggerated number of

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the Late Group coins becomes apparent from the record in Svoronos[10] where the entire group contains only half the number of tetradrachms listed for variety Κ with Helmet here represented by 4 coins (Cat. 21-24). Thus the present sample should have contained, under normal circumstances, no more than 2 pieces (rather than 5) for the Late Group and, as just indicated, some 15 (rather than 8) pieces collectively for the Early Plain and the various Special Series. In any case, it can be shown that if the 13 coins on record for the Plain and Special Series are redistributed so as to conform roughly to the statistics of the 1896 hoard, or those in Svoronos's catalogue, the composition of the overall sample would come close to being normal: thus the entire Plain Series would consist of some 5 (4+1 or 3+2) pieces, instead of 8, and the Special Issue of 8 (2+2+4), instead of 5.

That such a reapportionment is theoretically possible suggests that the observable discrepancies in composition were due to deliberate distortion. Thus it is likely that the coin dealer who put our sample together included a disproportionately high number of Late Group tetradrachms, not because of their profusion in the original find, but because of their great rarity. This selection was apparently made at the expense of coins of the Special Issue, particularly those of emission with ΔΙ Κ which were left out altogether. It is interesting that here too the dealer's preference for variety of ΔΙ and Bee (Cat. 34) over that of ΔΙ Κ seems to have been made on grounds of rarity, the former issue being the rarer of the two. The reason why the Special Issue as a whole faired poorly in the selection of the coins may be attributed to the generally mannered and inferior style of the tetradrachms which, as earlier stated, were mainly struck from dies cut by auxiliary engravers B and C.

A word now about the other missing variety, marked ΔΙ and Helmet. The reason for the latter's absence from the coin parcel is less apparent. These tetradrachms are all of a fine style (Artist A) and thus are indistinguishable from all others in the Regular Issue. Therefore if they were excluded, as before, for the benefit of the five Late Plain pieces, one wonders how it was possible to single out this particular emission

[10] *Ptolemies* 2, passim.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

from others which, like Cat. 1, 4, 9 and 21, are of similar size and workmanship. The explanation may be that the ΔI coins would have stood out from the rest by their fine preservation. As is noted in my recent study of the 1896 find, the tetradrachms with ΔI were struck practically at the end of the Helmet Series, in other words, just before the coins of the Late Group. In the present lot, therefore, they would have been among the least circulated coins and so in direct competition with the equally well-preserved Late Group pieces for the sake of which, apparently, they were laid aside.

Thus in the final analysis, the cases of the two omitted coin varieties, though not interchangeable in every respect, may be closely connected with the overgenerous inclusion of the Late Series tetradrachms and therefore explainable as instances of deliberate exclusion. Now, to the question why the selection of one group of coins should have resulted in the underrepresentation or even exclusion of others, there is probably one answer: the subdivision of the hoard into small lots, on the one hand, and the customer's specific demands and preferences, on the other hand, led to the creation of some consignments which, like our own, fell short of reflecting the composition of the original find. The extent to which such divisions can affect the contents of the resulting lots is amply demonstrated by some of the principal consignments of the 1896 find considered in my study of that hoard. There one can see not only glaring omissions of large issues, but also other distortions in composition, where one would least expect them to be. In that hoard it was of course possible to eliminate many of the distortions by combining several lots, but this cannot be done with our find which is known from only a single lot. However, it appears from the above that the absence of the two emissions from our record cannot be due to any inherent aspects of the original hoard (much less due to the chronology of the two emissions) and that it can very likely be traced to the latter's recent dismemberment in the market.

In this manner one may explain the outstanding peculiarities of the coin parcel. These considerations were based of course on the ideal assumption that the original find was formed within a brief period of time, from whatever coins existed in circulation, and therefore that its contents reflected the proportions in which the various emissions were produced. This assumption was necessary, for without it, it would have

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

been meaningless to compare its coin composition with that of the 1896 hoard which, as I have shown, *was* a "circulation deposit." Internal evidence from our coins, to be stated later, suggests that this assumption is very probably valid. On its basis we may thus suppose that our hoard was originally very similar to the 1896 find in regard to coin distribution, where the two hoards overlapped, and consequently that it also adequately represented the two important varieties left out from our lot.

FORMATION OF THE HOARD

A remarkable fact about the coin parcel—also true of the hoard of 1896—is that its collector included no Attic-weight tetradrachms whatsoever. It contains neither Alexander-type coins of foreign mintage nor any of the heavy tetradrachms locally produced, that is to say none of the coins which constitute the bulk of all earlier Egyptian deposits through Kuft and Phacous (about 305 B.C.). How this surprising change came about and what it meant can be understood from the series of fiscal measures which were tentatively discussed in the "Delta Hoard" article, measures whose cumulative effects first appear in our hoard and its earlier relative. In 312-310 B.C. the Egyptian mint proceeded to devalue its silver coinage (first devaluation) discontinuing at the same time its gold emission and, probably, withdrawing from circulation all domestic and foreign gold issues as well. The result of these changes was to loosen, though not completely sever, the country's ties from the Attic standard until then sacrosanct, and also to rid Egypt of a sizable part of foreign gold coin. Though these actions were not the earliest in Ptolemy's decisively unfolding policy, they were the earliest measures effectively to upset coin circulation in the satrapy since the coming of Alexander.

The next step came in 305-304 B.C. when Ptolemy forbade the use of Attic-weight silver currency, thus causing the disappearance of further quantities of coin, foreign and domestic. The only silver he allowed to circulate henceforth was, as the hoards tell us, the Athena coinage of debased weight which had been earlier inaugurated. However he immediately counterbalanced this measure by reviving the gold issue discontinued in 312-310. Here was a series of staters with new, transitional regal types which not only complemented the existing silver, but

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

also raised the gold-to-silver ratio to a higher level (11:1) from what it had been until 312-310. Although the tetradrachm retained the traditional satrapal format and the gold only partially endorsed the iconography held in store for the future, the exclusive circulation of these two series finally brought about the fiscal independence Ptolemy had long sought. The hoards which, with the evidence of the coinage itself, help reconstruct the sequence of these events, thus show that Ptolemy carried out a complete purge of foreign coinages and imposed on his territory a system in which the use of the local currency was both exclusive and mandatory.

The absence of Attic-weight silver from our parcel emerges as a valuable clue with regard to the hoard's formation. It tells us that the collector began putting away coins no earlier than 305-304, as it was only after this date that the tetradrachms of light weight remained uncontested in circulation. From this point on, and having decided to form the cache, he probably acted in one of the following ways: he either started to accumulate tetradrachms shortly after 305-304, thereafter adding coins periodically, or else waited for some time and then collected the coins in a single draw. In either case, he must have placed the last piece in his pot very soon after the end of the satrapal emission, which follows from two reasons. The first one is that the later coins in our sample give indications of little or practically no circulation wear. In the unpublished essay quoted from at the outset of this article, Newell describes the five specimens of the Late Plain Series as being of "very fine to brilliant condition and . . . obviously the latest pieces in the find." It was largely because of this assessment that he placed that group directly after the Helmet Series. Although this writer is in full agreement with Newell's relative chronology, he feels that the Plain tetradrachms in the parcel appear on the average a trifle less well preserved than those in the latest variety with Helmet (Cat. 21). This seeming contradiction, if such it is, may perhaps be explained by the fact that some of the Plain tetradrachms appear to have been deliberately damaged and, therefore, that their surfaces were affected by agents other than prolonged handling in circulation. At any rate, it is often difficult to judge objectively the circulation wear of coins solely from their appearance especially where, as in this case, the number of coins is small. But since the Egyptian mint was remarkably accurate in the weighing

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of the flans, it is possible within bounds to judge circulation wear by the weights of the coins. E.S.G. Robinson's estimate of the theoretical tetradrachm weight of reduced standard, about 15.70 grams, is probably a good approximation and, used as a standard, seems to indicate that (despite one atypically heavy coin, Cat. 21) both coin groups belong roughly to similar categories. Thus none of the late pieces appear to have been much circulated when the collector put them away.

The second reason is that the hoard did not contain any of the subsequent silver of the Eagle type. If, as it seems probable, the latter appeared without a significant time-lag, its inauguration can serve as an approximate terminus ante quem for the hoard's burial. It might be objected here that the collector included no Eagle tetradrachms not because these had not yet appeared, or because they were still few in number at the time of burial, but as undesirable for their inferior weight (a third devaluation). However, the two coinages cannot have coexisted, for the new gold and silver in all likelihood quickly pushed out of circulation the old satrapal pieces. Had this not been so, the mixing of the two groups would have brought coins of two different weight standards and gold-to-silver ratios (11:1 for the satrapal and 12:1 for the royal series) into direct confrontation, which is unlikely to have been tolerated for long in the now closed economy of Egypt. Also had the two coinages circulated together, people would have been tempted to stash away the heavier Athena pieces in preference to the later Eagle-type coins, which would have resulted in the secretion of many deposits containing Late Plain tetradrachms. But this does not seem to have been the case, judging from the scarcity of this kind of deposit.

Thus the time of the hoard's closing can be determined by the terminal date of the Athena tetradrachms or, equivalently, by the inauguration of the regal series to both of which it must be close. In anticipation of what will shortly be explained, that date may be placed no later than about 301 B.C. which fixes the boundaries of the hoarder's activity between about 305-304 and 301. These dates, based upon Ptolemy's coronation and the Battle of Ipsos, respectively, represent the maximum span, as the hoarding may have actually begun after the upper date and ended ahead of the lower one. This can also be said of the Late Plain Series tetradrachms whose emission corresponds to exactly the same span. Thus the hoard's formation can be placed within a period of about

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

three and one-half years which, however, judging from the closely knit structure and apparent smallness of the Late Series tetradrachms, may well have been shorter.

This is as far as one can go in determining the manner and time of the hoard's formation. It might now be mentioned that it would not make much difference to the composition of the coins whether the whole 305-304 to 301 interval or part of it were allowed for the formation of the hoard or whether the latter was put together in one or several collections. The reason for this is that the bulk of our coins (representing over 94 percent of the entire light-weight Athena issue) had been emitted by 305-304 and was therefore drawn from a body of coinage which was both essentially fixed in quantity and, as the distribution of obverse dies shows, thoroughly mixed into its constituent varieties. In theory, there could have been some difference in the make-up of the Late Plain tetradrachms, since these actually were being struck during the span in question, with repeated draws resulting in a small underrepresentation of them, and with a single collection resulting in a truer proportion relative to the earlier pre-305-304 group. But in neither case would the number of the late pieces have become exaggerated as is the case in our sample. Hence the original hoard must have had, to a large extent, the composition characteristic of a "circulation deposit," closely resembling in this respect the hoard of 1896 and, like it, reflecting the mint's actual output. It is not often, with early Ptolemaic hoards, that one gets any clear-cut indication of how the deposits were formed, and it is due to the special circumstances prevailing in Egypt near the end of the century that our coin parcel offers, like the 1896 find, such an interesting exception.

BURIAL OF THE HOARD

It has been stated that the hoard's concealment can be placed close to the time when the satrapal coinage gave way to the new royal series. The date for this point of transition is difficult to fix precisely, but a lower limit for it may be computed on outside evidence. A survey of Hellenistic hoards from the Levant seems to suggest, by negative testimony, that no Egyptian Athena tetradrachms ever circulated across this wide region and, to the knowledge of this writer, not a single

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

stray piece of that coinage has ever been reported definitely to derive thence. Now if one recalls that Ptolemy's armies did not set foot in the area from 312 to 301 B.C., that is to say, during the interval stretching between the Gaza and Ipsos Battles and that from the latter date, Ptolemaic forces were to occupy at least parts of the Levant *continuously* for some 100 years, one concludes that the Athena series had ceased to circulate and, hence, that its emission too had stopped some time before the fateful battle of 301; in the contrary case, one would expect, that some Athena pieces would have penetrated the region as they did the southeastern Peloponnese in the years following Ptolemy's occupation of Corinth and Sikyon in 308.[11] These conclusions are of sweeping character and, unless disproved by future discoveries, perhaps constitute the most potent means by which to determine the time of transition from the satrapal to the regal monetary systems of Ptolemy. With regard to our hoard, they provide strong proof that the latter's concealment took place before 301. However, these facts give only a terminus ante quem and can in no way determine the exact year of that event.

As for the reason of the hoard's concealment, this is perhaps to be sought in the appearance of the new devalued currency of the Eagle type. The collector, being at this time in possession of what he took to be premium Athena pieces, may have decided to hold on to his coins rather than spend them. In the normal course of events, the recall of the satrapal series by the State would have convinced him that the accumulated capital, never admissible abroad and now no longer exchangeable at home, had become a liability and that it would be more profitably used if surrendered to the mint for new coin, or made good in some other manner, than if it remained stashed away. But the money was never disturbed from its hiding place, as the collector was apparently prevented by unforseen events from ever reclaiming his sum.

The retrieval of the hoard, though not by its owner, is a welcome piece of luck, for considering the exclusive nature of its contents—this apart from its other special features—it is a deposit of a rare kind and a far cry from the hoards of an earlier period where plurality of coinages was the key feature. The lot closely resembles in composition

[11] See the Chiliomodi hoard, *IGCH* 85.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the Delta hoard of 1896, the only other known deposit of the kind and, like the latter, was probably interred somewhere in Lower Egypt. It also resembles that deposit in the manner in which it was collected, but unfortunately distortion of its contents in the market has made it—or what is left of it—a less trustworthy guide to the chronology of the coinage encompassed. But this flaw is made up by inclusion in the lot of five pieces of the Late Series which clearly show that our hoard was concealed a few years after its relative of 1896 and that therefore the disappearance of Attic-weight silver in Egypt was, as first evidenced in the earlier find, neither an accident of hoard collecting nor a passing event but an irreversible feature (as other evidence also shows) of Ptolemy's radical policy. Since the late pieces trace the series of satrapal silver nearly to its end, it is likely that even with future discoveries our hoard will remain the latest of its kind. Tetradrachms of the Athena variety do turn up sporadically in later finds, but their presence in those instances seems to be intrusive, as that coinage was no longer in circulation. Judging therefore from the coins here studied, our hoard emerges as something of a historical mark, containing, as it does the last remnants of Alexander's Egyptian coinage.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

THE SELEUCID MINT AT LAMPSACUS

(PLATE 8)

ARTHUR HOUGHTON

In dealing with a large body of Seleucid material from the third century, evidently originating from the area of the Hellespont, Edward T. Newell proposed assigning to Lampsacus and Abydus two coin series struck at the time of Antiochus II and Antiochus Hierax which were differentiated by their separate use of two symbols—forepart of Pegasus and eagle—long associated with each city. The fact that each group was generally distinguished by the use of different monograms, implying thereby no commonality of mint authority or magistracy between the two, tended to support the thesis of separate attributions, although Newell was quick to acknowledge strong stylistic similarities between both series and the somewhat unusual (but not unknown) circumstance of an obverse die being transferred between the mints, apparently from Abydus to Lampsacus.

A previously-unpublished tetradrachm of Antiochus Hierax which explicitly links both series by monogram, however, strongly indicates that they were the product of a single mint. It also has implications for the chronology and arrangement of the Lampsacus/Abydus coinage as given by Newell which can usefully bear reexamination.

The coin in question is illustrated at Plate 8, 1. It is linked to *WSM* 1557, pl. 71, 11 ("Abydus") by obverse die, but was clearly struck at a later date as indicated by the die flaw behind Hierax's head, which is also visible on *WSM* 1548–49, pls. 70, 11-12; 71, 1 ("Lampsacus"). The coin's reverse bears the symbols eagle and torch, which appear together only on *WSM* 1556–58, attributed to Abydus. However, the reverse monogram  appears (with the exception of *WSM* 1559, also assigned by Newell to Abydus, albeit with hesitation) on coins attributed exclusively to Lampsacus. One may conclude as a consequence that "Lampsacus" and "Abydus," each of whose series share either symbol or monogram on this coin, are one and the same mint.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Which mint? The sparse historical record indicates that Hierax assumed charge of the western portions of Asia Minor after the battle of Ancyra in 240 or 239 B.C. until his defeat by Attalus I some 11 years later. It gives no suggestion, however, which locality in this most northern district of Hierax's control might have struck what is, after Alexandria Troas, the most extensive issue of his coinage that has come down to us today.[1] The numismatic evidence is somewhat more helpful and tends in fact to support an attribution to Lampsacus, which issued a prolific coinage under Lysimachus, as Newell was aware. Other localities in the Hellespont, lacking Lampsacus's combination of size, commercial and strategic position, and prior history of coinage, have a weaker claim on the distinction of having struck the series under discussion. Finally, the torch symbol, used for an extensive period on this coin series, was also commonly used on issues of Lampsacus under Lysimachus.[2]

The following proposed rearrangement of the issues of Antiochus Hierax struck at Lampsacus incorporates material unavailable to Newell at the time of his own research. While the listing portrays a generally-ordered progression of coin issues, it should not be seen as being strictly sequential since several obverse dies may have been used more or less simultaneously.

CATALOGUE

SERIES 1 (EAGLE, LONG TORCH)

Group A: ⊠, ⊠ and ⊠

Obv.: Diademed head of king to r.; no border.

Rev.: Apollo seated to l. on omphalos, holding arrow in outstretched r. hand and resting l. on bow; to r., ΒΑΣΙΛΕΩΣ; to l., ΑΝΤΙΟΧΟΥ; in inner l. field, long torch; in exergue, ⊠ or ⊠ and eagle facing l.

[1] As indicated by the 16 obverse dies used in this series, compared—by the writer's count—to 21 attributable to Alexandria Troas (including 4 employed on Alexander-type tetradrachms struck under Hierax); 8 to Sardis; 7 to Parium; 8 to Ilium; and 1 to Lysimachia, *WSM* 1614, the latter having been previously used within the present series.

[2] M. Thompson, "The Mints of Lysimachus," *Essays Robinson*, pp. 163–82.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

A1–P1 17.14 Naville 10, June 1925, 932, pl. 35. *WSM* 1558 *δ*, pl. 72, 2. The monogram appears to be ⊠ or ⊠.

A2–P2 ↑ 17.10 Berlin. *WSM* 1558*α*, pl. 71, 12.

" " ↖ 16.93 Cambridge. (*SNGFitz* 8, no. 5567, pl. 119). *WSM* 1558 *β*, pl. 72, 1.

" " ↑ 16.40 The Hague, no. 6926. *WSM* 1558 *δ*.

A3–P3 ↑ 16.66 Berlin. *WSM* 1558 *ε*, pl. 72, 3. Of crude style, possibly a barbaric imitation.

Obv.: Same type; border of dots.

Rev.: Same type and inscription; in inner l. field, long torch; in exergue, eagle facing l. and ⊠.

A4–P4 16.86 Berlin. *WSM* 1556 *α*.

" " 17.05 Paris. *WSM* 1556 *β*, pl. 71, 10.

" " — Münzen und Medaillen FPL, May 1961, 211.

Obv.: Same type; no border.

Rev.: Same type and inscription; in inner l. field, long torch; in exergue, eagle facing l. and ⊠.

A5–P5 ↗ 17.02 *WSM* 1557 *α*.

" " 17.00 London. *WSM* 1557 *β*.

" " ↗ 17.12 New York. *WSM* 1557 *γ*, pl. 71, 11.

A5–P6 — Münzen und Medaillen FPL, June-July 1956, 6.

Group B: ⊠

Rev.: Same type and inscription; in outer l. field, eagle above ⊠; in inner l. field, long torch.

A5–P7 ↑ 16.99 Author's collection. Plate 8, 1.

SERIES 2 (EAGLE, CADUCEUS)

Obv.: Same type ; no border.

Rev.: Same type and inscription; in field to l. of Apollo's head, caduceus; to l. of legs, ⊠; in exergue, eagle facing l.

A6–P8 ↖ 16.91 New York. *WSM* 1559, pl. 72, 4. This coin is distinguished from other Lampsacus issues under Hierax by significant differences of obverse and reverse style.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

SERIES 3 (FOREPART OF PEGASUS, LONG TORCH)

Group A: ⋈ or ⋈

Obv.: Same type; no border.

Rev.: Same type and inscription; in inner l. field, long torch above forepart of Pegasus to l.; in exergue, ⋈.

A7–P9		17.03	Berlin. *WSM* 1554, pl. 71, 8.
" "	↘	16.98	Boston. (*MFA*, no. 269, pl. 24).
" "		17.12	Münzen und Medaillen 37, Dec. 1968, 233 (= Kricheldorf, May 1956, 1115).
A2–P9		—	Gerhard Hirsch 35, June 1963, 472. Reverse die shows considerable wear and monogram has been retouched.

Obv.: Same type; no border.

Rev.: Same type and inscription; in inner l. field, long torch; in exergue, forepart of Pegasus to l. and ⋈.

A8–P10	↑	15.85	New York. *WSM* 1552 β, pl. 71, 5.
A8–P11	↑	16.57	Copenhagen (*SNGCop* Syria, no. 127, pl. 4).
A8–P12		16.91	Münzen und Medaillen, June 1954, 1197, pl. 44.
A8–P13	↑	16.32	Author's collection (Ex Numismatic Fine Arts Catalog, vol. 4, no. 2 [1975], H56 = Leu 13, Apr. 1975, 298).
A9–P14		17.07	Naville 10, June 1925, 933, pl. 33. *WSM* 1552 α, pl. 71, 4. Reverse die same as *WSM* 1550, with monogram recut and symbols added.

Rev.: Same type and inscription as above; in outer l. field long torch; in exergue, forepart of Pegasus to r. and ⋈.

A8–P15		16.88	*WSM* 1551, pl. 71, 3.

Group B: ⋈

Obv.: Same type; no border.

Rev.: Same type and inscription; in exergue, ⋈.

A7–P16		17.08	Paris. *WSM* 1553 α.
" "	↑	17.17	London. *WSM* 1553 β, pl. 71, 6.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

A7–P17	†	17.12	New York. *WSM* 1553 γ, pl. 71, 7.
" "	†	17.07	Cambridge. (*SNGFitz* 8, no. 5566, pl. 119). *WSM* 1553.
" "	†	17.16	Hess-Leu 31, Dec. 1966, 513, pl. 21.

SERIES 4 (BEE)

Obv.: Same type; no border.
Rev.: Same type and inscription; in exergue, bee.

A5–P?		16.98	Naples, no. 8724. *WSM* 1548 α.
A5–P18	†	16.98	New York. *WSM* 1548 β, pl. 70, 11.

Rev.: Same type and inscription; to l. of Apollo's legs, bee.

A5–P19		16.92	Berlin. *WSM* 1549 $\propto$, pl. 70, 12.
A5–P20	†	17.00	The Hague, no. 6918. *WSM* 1549 β, pl. 71, 1.
" "			Hesperia Art FPL, Mar. 1963, 39.

Obv.: Same type; border of dots.
Rev.: Same type and inscription; in exergue, bee.

A10–P21		16.82	Glasgow. *WSM* 1546 α.
" "		16.41	Boston. (*MFA*, no. 2156, pl. 99). *WSM* 1546 β.
" "	†	16.95	New York. *WSM* 1546 γ, pl. 70, 9.
A10–P22		15.94	Glendinning, Jan.-Feb. 1951, 261 (=Glendinning, July 1950, 162). Plate 8, 2.
A10–P23		16.85	Glendinning, Apr. 1954, 33 (possibly = Coin Galleries FPL, Mar.-Apr. 1960, A149, which shows obverse only).

Obv.: Same type ; no border.

A9–P24		17.00	Paris. *WSM* 1547, pl. 70, 10.
A9–P25	†	17.00	Copenhagen (*SNGCop* Syria, no. 126, pl. 4).
" "		—	Jacques Schulman, Apr. 1965, 1468.

Obv.: Same type; wings added to diadem, portrait surrounded by border of dots.
Rev.: Same type and inscription; to l. of Apollo's legs, bee.

A11–P26		16.85	Paris. *WSM* 1545, pl. 70, 8.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

SERIES 5 (NO SYMBOL; ⊠ OR ⊠)

Obv.: Same type.

Rev.: Same type and inscription; in exergue, ⊠.

A11–P27 ↑ 16.75 New York. *WSM* 1544, pl. 70, 7 (Newell renders monogram as ⊠).

Rev.: Same type and inscription; name of king recut over earlier attempt; monogram apparently ⊠.

A11–P28 — Glendinning, Mar. 1970, 103.

SERIES 6 (TRIPOD)

Group A: ⋔

Obv.: Same type; no border.

Rev.: Same type and inscription; in exergue, tripod and ⋔.

A8–P29 16.7 Beirut, American University. *WSM* 1543 *α*.

↑ 17.10 New York. *WSM* 1543 *β*, pl. 70, 6.

Group B: *no monogram.*

Obv.: Same type; no border.

Rev.: Same type and inscription; in exergue, tripod.

A8–P30 ↑ 16.84 New York. *WSM* 1542, pl. 70, 5.

A12–P31 ↗ 16.39 New York. *WSM* 1541 *α*.

A12–P32 16.49 London. *WSM* 1541 *β*.

" " ↑ 16.73 New York. *WSM* 1541 *γ*, pl. 70, 3

" " — Glendinning, Dec. 1974, 92.

A12–P33 ↑ 17.20 The Hague, no. 6921, *WSM* 1541 *δ*, pl. 70, 4.

A12–P34 ↑ 16.80 Copenhagen (*SNGCop* Syria, no. 124, pl. 4)

A12–P35 16.85 Glendinning, Jan.-Feb. 1951, 260. Plate 8, 3.

A13–P36 ↑ 16.36 Jerusalem, Arnold Spaer Collection. Plate 8, 4.

Obv.: Draped bust of king to r.; no border.

A14–P37 17.14 H. Seyrig, *Tresors Monétaires Séleucides I* (Mektepini Hoard), no. 197, pl. 31.

A15–P38 ↑ 16.96 Author's collection. Plate 8, 5.

In addition to the above, Seyrig lists one other of similar obverse and reverse type, weight 17.06. Dies are not shown.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.: Draped bust of king to r.; no border.
Rev.: Same type and inscription; to l. of Apollo's legs, tripod.
A15–P39 17.11 Seyrig, no. 199, pl. 31.
Seyrig lists two others of similar obverse and reverse type, weighing 17.05 and 17.72, respectively. Dies are not shown.

Obv.: Head of king to r.; no border.
Rev.: Same type and inscription; to l. of Apollo's legs, tripod.
A16–P40 17.05 Seyrig, no. 202, pl. 31. Plate 8, 6.
Seyrig lists one other of similar obverse and reverse type, weight 17.01. Dies are not shown.

As Newell perceived, *WSM* 1556–58 follow immediately after *WSM* 1555[3] and are linked to it by the monogram ⊠.[4] If, as Newell proposed, *WSM* 1555 was struck under Antiochus II, this single die evidently saw brief use at Lampsacus toward the end of this ruler's reign, and was then moved by way of Ilium to Alexandria Troas, where it was recut to add wings to the diadem.[5] Following the death of Antiochus II, the mint at Lampsacus, along with that at Alexandria, seems to have undergone a four or five year hiatus: while the historical record suggests no specific reason why Seleucus II, as Antiochus's heir, should not have issued coinage at either locality, none so identifiable has come down to us today. Indeed, the available evidence indicates scant mint activity in the Hellespont-Troad area between 246 and the accession of Antiochus Hierax except at Ilium and Parium, where two very brief issues were struck under Seleucus.[6] *WSM* 1558, which follows in logical sequence to *WSM* 1555, therefore, appears to inaugurate a reissuance of coinage at Lampsacus with Hierax's accession.

The initial demand for coinage under Hierax at Lampsacus may have been relatively heavy. Under the magistracy of ⊠ two obverse dies

[3] Which displaces *WSM* 1536–40 as issues of Antiochus II at this mint.

[4] Later rendered ⊠, ⊠ and ⊠, all of which possess the same elements and undoubtedly represent the signature of a single individual.

[5] *WSM*, pp. 328–29.

[6] A. R. Bellinger, *Troy—The Coins* (Princeton, 1961), p. 18, and H. Seyrig, "Parion au 3e siècle avant notre ère," *ANSCent*, pp. 603–5.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

(A1, A2) cut by the same hand appear to have been used more or less simultaneously and a second, far less skilled engraver, was evidently called in to assist with the work (A3).

A third artist was then employed, first cutting obverse die A4 (*WSM* 1556), then A5. The latter die shows a stylistic evolution toward a portrait characterized by hair in short, tight and even curls, an unusually precise definition of lips, and a diadem generally clear of the king's ear and hair. While the use under a single magistrate of five separate obverse dies in what cannot have been more than a two or three year period is not in itself unusual for an important mint, it should be remembered that within the same general district Parium, Ilium and Alexandria were now also striking coinage for Hierax, as was Sardis to the south. Moreover, there is a makeshift nature visible in the early coinage of Hierax at Lampsacus (the crudeness of A3 being one example), suggesting an unforeseen demand which had to be met by various methods, including the hurried use of unskilled artists. This condition was to persist. The transfer of mint authority to a new magistrate, ΦΗ, was accompanied by the reuse of obverse die A5, now flawed, and the introduction of yet another novice engraver to cut the portrait of *WSM* 1559.[7]

To judge from the single example known this latter issue appears to have been short-lived, possibly because of its inferior quality. For whatever reason, it was followed by a die (A7) clearly cut by the same artist of A1 and A2, then by another (A8—*WSM* 1552) produced by the engraver of A4 and A5.[8]

At the same time a new die (A9) which in the writer's opinion had seen use elsewhere[9] was brought into use at Lampsacus, the fifth and

[7] Which Newell (*WSM*, p. 331) appeared to see—incorrectly in the writer's view—as having been copied from the obverse die A9; this thesis, moreover, tends to skew an ordered chronology of the series.

[8] Close examination of *WSM* 1552 in the collection of the ANS does not reveal a retouching of the obverse die, as Newell states, and it may be seen that this coin was struck *prior to WSM* 1542–43.

[9] Newell included *WSM* 1550 in his arrangement of the Lampsacus series in the apparent belief that its obverse die had been used previously (*WSM* 1547, in conjunction with the reverse symbol, bee) and later (*WSM* 1552 *a*, the reverse die now recut to include both torch and forepart of Pegasus and to render the monogram ΑΡ

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

perhaps last to be employed under [10] who was thereafter replaced, apparently for a relatively short period, by . A significant epigraphical change now occurred at Lampsacus. Where up to that point symbols had always appeared on its coinage in combination with monograms, now they were to be used generally alone to represent the mint's final two magistrates, who signed themselves bee and tripod, respectively.[11] Whatever the reason for this change, the mint apparently faced the same problems of demand under these individuals as it had under their predecessors. Bee, for example, had to employ a flawed obverse die (A5) which had been set aside some years before, another used and recut die (A11), and a single new obverse (A10); while under tripod five new obverse dies (A12-16) were cut to help meet the coinage requirements of Hierax during his final years. It was only during this last period of activity under Seleucid control, in fact, that Lampsacus became somewhat more orderly in its means of production: no longer employing dies from other localities, flawed dies used at an earlier period, or the occasional unskilled engraver.

A remaining question is why, during the early years of Hierax's reign, Lampsacus used the eagle symbology on one series of coins more or less at the same time that it was applying its own city badge (forepart

---

as at that mint. Purely aside from the problem of chronology which Newell's arrangement raises, several aspects of *WSM* 1550 suggest that it does not belong to the Lampsacus series at all. For one matter, the monogram is not otherwise known at this mint; for another, a monogram used alone is the exception to the series rather than the rule. As may be seen, the Seleucid coinage of Lampsacus was generally marked by an increasing simplicity of reverse type—from one symbol and two monograms under Antiochus II, through two symbols and one monogram, to a single symbol by the final years of Hierax's reign. If *WSM* 1550 was struck elsewhere, as appears to have been the case (Parium is a conceivable although not entirely satisfactory alternative), both obverse and reverse dies were then moved to Lampsacus where the latter was recut.

[10] Or , both monograms having the same elements.

[11] The numismatic evidence provides no compelling reason why bee should precede tripod, and the arrangement suggested above is made on the assumption that the use of a bust as obverse type was contemporaneous at both Lampsacus and Sardes, coming at the end of Hierax's reign. See O. Mørkholm, "Some Seleucid Coins from the Mint of Sardes," *NNA* 1969, pp. 6–10.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of Pegasus) to other issues. Given the available facts, the most reasonable explanation appears to be that lacking a mint of its own for economy or other reasons, Abydus was able to lay claim on part of the production of Lampsacus for its own coinage needs. In order to distinguish the "Abydus" issues from its own, the mint at Lampsacus provided each with distinctive city symbols. When it was no longer necessary to strike "Abydus" coinage, Lampsacus then continued with its own series, dropping forepart of Pegasus in the process and adopting a more abbreviated combination of monograms and symbology, and finally during its last issues simply using bee and tripod as identification.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

THE ERA OF THE PAMPHYLIAN ALEXANDERS

(PLATE 9)

OTTO MØRKHOLM

From a certain period within the hundred years from 250 to 150 B.C. we possess an important coinage of posthumous Alexander tetradrachms from several mints in the Pamphylian area.[1] The issues of Sillyum were small, but the cities of Aspendus, Perge and Phaselis produced very extensive coinages of great economic significance. Except for Perge the place of minting is clearly indicated by the initials of the cities. The anonymous series of Perge has been attributed to this city by Henri Seyrig in a definitive and conclusive study.[2]

The special importance of the Pamphylian Alexanders derives from the fact that they are apparently dated. In the field of the reverse the coins of all the cities show various letters which produce a numerical sequence that has always been taken to indicate years of one or several different eras. The sequence runs from 1 to 33 at Phaselis and Perge, from 1 to 31 at Aspendus, in all three cases with a very few breaks.[3] In the absence of a complete die study of the emissions involved we cannot be absolutely sure that the numbers indicate years, but under the present circumstances it seems most likely, and the theory of annual dates is accepted in the following discussion.

The next step in our investigation is, of course, to establish the era or eras used on these coinages. Up to a fairly recent date it was generally assumed that all the coinages were dated according to one and the same era which started in 189/188 B.C. after the battle of Magnesia and contemporary with the settlement of Apameia in 188 B.C. A hoard from

[1] Phaselis is situated on the east coast of Lycia facing the bay of Antalya. The term Pamphylian in this paper includes Phaselis.

[2] H. Seyrig, "Monnaies hellénistiques VIII, Pergé," *RN* 1963, pp. 38-51.

[3] At Phaselis only '29' is missing; at Perge '5', '6' and possibly '10'; at Aspendus '7' (?), '13' and '30'. The issues of Sillyum only comprise the numbers '3' to '6' and '11'.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Gordium in Phrygia first made a revision of this dating necessary. This hoard, which contained Pamphylian tetradrachms down to Perge, year 14, must on account of its Seleucid element be dated towards the end of the third century B.C., and consequently the publisher of the hoard, Dorothy H. Cox, suggested that the common Pamphylian era might begin in 229/228 B.C. [4] Ten years later Henri Seyrig, in his important study of the Pamphylian Alexanders, moved the beginning of the era down to 221/220 B.C.[5]

Up to this point scholars dealing with these issues had agreed that all four cities used the same era to date their coins. The style of the coins and their occurrence in hoards made them contemporary in a general sense, the dates were placed in the same way on all the issues and, most important, except for Sillyum with its few coins, the sequence of numbers covered practically the same range. But in his important book published in 1972 Christof Boehringer argued very acutely that the era used was not the same for all cities. Sillyum has left us too few coins to decide the question, but for the other cities Boehringer found three different eras. According to his arrangement Perge was the first city to coin posthumous Alexanders, beginning in 219/218 B.C., followed by Phaselis in 218/217 and Aspendus in 210/209.[6] Especially the gap of ca. 10 years between Perge and Aspendus seems very well documented by the evidence adduced by Boehringer, and his results were accepted by Seyrig.[7]

In order to arrive at his new dating Boehringer used three main arguments. In the first place the time lag between Perge and Aspendus was worked out by an analysis of several hoards from Asia Minor, all buried

[4] D. H. Cox, *A Third Century Hoard of Tetradrachms from Gordion* (Philadelphia, 1953) pp. 18–19. Miss Cox dated the hoard to ca. 210 B.C. The burial date was subsequently lowered to ca. 205 B.C. by H. Seyrig (above, n. 2), p. 42 and to ca. 200 by F. Kleiner, "The Alexander Tetradrachms of Pergamum and Rhodes," *ANSMN* 17 (1971), p. 116.

[5] Seyrig (above, n. 2), pp. 41–42.

[6] C. Boehringer, *Zur Chronologie mittelhellenistischer Münzserien 220–160 v. Chr.* (Berlin, 1972), pp. 52-62.

[7] H. Seyrig, *Trésors du Levant anciens et nouveaux* (Paris, 1973), pp. 34–35. Boehringer's chronology (above, n. 6) is also accepted by F. Kleiner, *AJA* 1973, p. 353, by F. Melville Jones, *NC* 1973, p. 227 and by G. Le Rider, *RN* 1972, pp. 253–59.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

between ca. 205 and 190 B.C. Here the latest dates on the coins of Aspendus were regularly between 8 and 13 numbers lower than the latest dates of Perge.[8] Secondly, an examination of the Syrian anchor countermark frequently applied to the Pamphylian Alexanders showed that the countermark appeared relatively much more frequently on Aspendus coins of years 21 to 29 than on the corresponding coins from Perge, according to Boehringer because the Aspendus coins were later and therefore available in greater quantities at the time of the countermarking in Syria.[9] Finally, the absolute dates for the Pamphylian issues were obtained by an examination of the number of specimens preserved. A large issue of Perge year 29, and a following very small one of year 30 were assigned to the years 191/190 and 190/189 and connected with the battle of Magnesia in late 191 and the subsequent withdrawal of the Seleucids from Asia Minor. A similar, although not as pronounced, fluctuation in the numbers of specimens from Aspendus years 20 and 21 was used to correlate these two issues with Perge years 29 and 30, producing the absolute dates mentioned above.[10]

The acute and detailed analysis of Boehringer makes his arrangement very persuasive, but there is still some room for legitimate doubt. In the first place it should be pointed out that the estimate of the relative size of the various issues is based on the number of specimens registered by Seyrig, not on the number of dies, especially obverse dies, involved in their production which is generally and rightly accepted as a safer method. For instance it arouses suspicion when one discovers that the ten specimens of Perge year 29 in the American Numismatic Society were all struck from one single obverse die, while the two specimens of Perge year 30 in the same collection were produced from two different obverse dies. The need for a complete die study of a series before any reliable conclusions on the size of separate issues can be drawn, should be emphasized.

Secondly I want to point out that the important hoards revealing the time lag between issues of Perge and Aspendus all derive from Asia Minor. Setting aside a couple of hoards with only very few coins of the

[8] Boehringer (above, n. 6), p. 52.

[9] Boehringer (above, n. 6), pp. 54-56.

[10] Boehringer (above, n. 6), p. 56 (Perge) and p. 59 (Aspendus).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

series here under consideration,[11] the hoard evidence may be tabulated as follows:

Reference	*IGCH*	*Find Place*	*Burial Date* (B.C.)	*Perge*	*Aspendus*
1.	1426	Southern Asia Minor	ca. 210–200	8 sp. to year 15	5 sp. to year 2
2.	1318	Sardes, Lydia	ca. 190–188	6 sp. to year 29	6 sp. to year 20
3.	1411	Central Asia Minor	ca. 190–188	7 sp. to year 29	3 sp. to year 18
4.	1410	Mektepini, Phrygia	ca. 190–188	35 sp. to year 29	39 sp. to year 19
5.	1413	Ayaz-In, Phrygia	ca. 190–188	11 sp. to year 29	13 sp. to year 20

In evaluating the hoard material it should be remembered that the first and third hoards are only imperfectly known. As so often happens they were dispersed shortly after their discovery, and we have no assurance that our records are complete. The Sardes hoard no. 2 was discovered during excavations, but the number of coins from Perge and Aspendus is not so large that we can accord independent value to its testimony. It is really only the two substantial hoards of Mektepini and Ayaz-In that provide the tangible evidence for Boehringer's distinction.

The second line of reasoning used by Boehringer, the frequency of the anchor countermark, may be used to construe an entirely different explanation of the whole problem. Strictly speaking the occurrence of the anchor countermark can only show that practically all the Pamphylian issues were present in Syria before the application of the countermark, which is now generally assumed to have been used sometime in the decade 180 to 170 B.C.[12] The incidence of the countermark further shows which issues were available in Syria in some quantity at the time. If, for instance, the issues of Aspendus of a certain period tended to

[11] It should be obvious that conclusions can be based neither on the Syrian hoard *IGCH* 1535, which contained only one coin of Perge and one of Aspendus, nor on such late hoards as Latakia, *IGCH* 1544, and Babylon, *IGCH* 1774, which were buried in ca. 170 and ca. 155–150 B.C., respectively.

[12] Boehringer (above, n. 6), pp. 20–22; Seyrig (above, n. 7), p. 55. The earlier contribution of Seyrig, "Monnaies contremarquées en Syrie," *Syria* 35 (1958), pp. 194–197 (=*Antiquités syriennes*, 6 [Paris, 1966], pp. 8–11) is still the most comprehensive discussion of this countermark.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

travel to Syria in larger quantities than the contemporary issues of Perge this might be reflected in the stock of Pamphylian coins available for countermarking in exactly the way we see it, without any chronological implications for the two issues we are dealing with. This argument is reinforced by the fact that the Aspendian coins later than year 20 are hardly found in our hoards *from Asia Minor*. The valuable observations of Boehringer might find a natural explanation if we assume that the Aspendus tetradrachms of years 21 to 29, for some reason unknown to us, were used mainly for trade with Syria, while the issues of Perge of years 21 to 33 were circulating in Asia Minor and only occasionally found their way to Syria. In this way there would be no reason to postulate different eras for the two Pamphylian cities. Their issues might as well be contemporary, as was generally assumed before Boehringer, on account of the obvious parallelisms between the two issues.

Up to this point my interpretation of the numismatic evidence has been just as speculative as that of Boehringer and it would be very difficult, indeed, to make a choice between the two explanations. Here a new discovery will assist us to settle the question. I have already mentioned that neither Boehringer nor his predecessors have made a full analysis of the dies used for the coinages under discussion. And it becomes more and more obvious that most conclusions from numismatic material, which has not been subjected to a proper die study, can only be regarded as preliminary. In the collections of the American Numismatic Society I have found an Aspendus tetradrachm of year 10 (Plate 9, 1)[13] which is struck from the same obverse die as several specimens of Perge, year 14 (Plate 9, 2–3). According to Boehringer's chronology for Aspendus, year 10 equals 201/200 B.C., while for Perge, year 14 corresponds to 206/205 B.C.[14] While used at Aspendus the die was in brilliant condition. At Perge it shows various traces of wear, especially a growing die-flaw in the right field. The Perge coins from this die were definitely struck *after* the coin from Aspendus, not five years earlier as the Boehringer chronology would require.

The new die link strongly suggests a return to the earlier view that the issues of Perge and Aspendus were dated according to the same era

[13] This coin was published in *SNGANS*, pt. 1, no. 324.

[14] See the table in Boehringer (above, n. 6), p. 62.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

which would also be the one used at Phaselis and Sillyum. Theoretically one might argue that year 10 of Aspendus corresponded to year 14 of Perge and that there still was a time lag of up to four years between the two series, but this idea has, as far as I can see, very little to recommend it. We have other instances in the Hellenistic period of obverse dies being used for several years. At Phaselis, to remain with the Pamphylian Alexanders, the same obverse die was used in years 13, 14 and 15 (Plate 9, 4–6) and an exhaustive die study might well bring other examples. Recently, an issue of dated Ptolemaic tetradrachms from Citium on Cyprus has been published, where the same obverse die was used for five consecutive years.[15] Examples could easily be multiplied, but the evidence here cited suffices to demonstrate that it is not impossible that a die was first used at Aspendus, then transferred to Perge and put to use there four years later. The reason for the transference escapes us completely, but the fact is there, and we cannot always expect to hear the grass growing.

Concerning the absolute chronology of the posthumous Alexanders of Pamphylia I have already voiced some doubt as to the dates of Boehringer. With the knowledge that the four cities involved used eras with the same or approximately the same starting point, the general historical considerations of Seyrig can hardly be improved.[16] I would therefore suggest a return to his dating, placing the first year of the Pamphylian era in 221/220 rather than in 219/218, the date advocated by Boehringer for Perge. The year 33 would then correspond to 189/188, the year of Apameia.[17] It is hardly feasible that any of the coinages

[15] H. Kyrieleis, "Die Porträtmünzen Ptolemaios' V. und seiner Eltern," *JdAI* 88 (1973), pp. 21–22, figs. 12–16.

[16] Seyrig (above, n. 2), pp. 40–42.

[17] Quite recently T. Fischer has dealt with the Pamphylian Alexanders in "Tetradrachmen und Kistophor," *Actes du 8ème congrès international de numismatique. New York-Washington, septembre 1973* (Paris/Basel, 1976), pp. 45-70. He rightly argues that the cities used one and the same era, but his attempt at reviving the date 190/189 or 189/188 for the beginning of the era must be regarded as a failure. His ingenious theories about the nature of the hoards (a rigid distinction between "Depotfund" and "Münzversteck" and the complicated attempt at defining the "Umlaufswerte") of the various coinages are hard to follow, and the results, entailing a general downdating of a number of important coin hoards from the early second

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

should have continued into hhe period of Attalid domination over Pamphylia.

---

century B.C., carry no conviction at all. The burial date of a hoard from Seleucid territory has still to be defined from its latest datable elements, which are generally the royal coinages of the Seleucids. This principle, simple but sound, leads to the conclusion that the Latakia hoard (*IGCH* 1544), to take that as an example, must be dated to the reign of Antiochus IV, ca. 170 B.C., not after 158 B.C. (Fischer), a dating that leaves the absence of the latest issues of Antiochus IV and of all coins of Antiochus V and Demetrius I completely unexplained. Its burial date furnishes the terminus ante quem for the application of the Seleucid anchor countermark, which according to Fisher belongs to the 150s B.C. See most recently Seyrig (above, n. 7), pp. 49–56.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

HOARD EVIDENCE AND THE LATE CISTOPHORI OF PERGAMUM

(PLATES 10–17)

FRED S. KLEINER

The chief currency of the Roman province of Asia from its formation in 133 B.C. to the time of Hadrian and beyond was the cistophoric coinage.[1] The cistophori originated as the royal coinage of the Attalid kingdom and the curious types chosen for the coins make allusion to Dionysus, who was especially revered at Pergamum, and to Heracles, the father of Telephus, the legendary founder and first king of Pergamum.[2] When the last of the Attalids bequeathed his kingdom to Rome in 133, the cistophoric types and weight standard were retained without change until the early 40s B.C. when some minor adjustments in the reverse types were introduced under the Roman provincial governors.[3] Significant type changes were subsequently made for Mark Antony and the Roman emperors, but the unique cistophoric weight standard was maintained.

[1] The only study of the entire cistophoric coinage is M. Pinder, "Über die Cistophoren und über die kaiserlichen Silbermedaillons der römischen Provinz Asia," *AbhBerlin* (1885), pp. 533-635 (hereafter cited as Pinder). Studies published prior to 1961 have been collected and abstracted by D. Kienast, "Literaturüberblicke der griechischen Numismatik: Cistophoren," *JNG* 11 (1961), pp. 159-88. Two monographic studies have been published since 1961: C. H. V. Sutherland, N. Olçay and K. E. Merrington, *The Cistophori of Augustus* (London, 1970); F. S. Kleiner and S. P. Noe, *The Early Cistophoric Coinage*, NS 14 (New York, 1977), hereafter cited as *ECC*. William E. Metcalf is preparing a monograph on the Hadrianic cistophori. *DCE* = F. S. Kleiner, "The Dated Cistophori of Ephesus," *ANSMN* 18 (1972), pp. 17-32. I am indebted to Peter R. Franke and Christof Boehringer for providing information about and casts of the coins in two hoards (*IGCH* 1461, 1462) published here.

[2] *ECC*, p. 13. G. van Hoorn, "De origine cistophorum," *Mnemosyne* (Leiden, 1915), pp. 233–37.

[3] Pinder, pp. 567–70.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Throughout the long history of cistophoric emissions the primary mint was located in Pergamum, the Attalid capital. During the pre-provincial period the leading position of the Pergamene mint is documented not only by the greater number of known Pergamene obverse and reverse dies, but by the fact, established by die linkage, that the early cistophori of Apameia, Sardes, and Synnada were also struck at the Pergamene mint.[4] After 133, and before the addition, in the 50s, of Roman names in Latin to the cistophoric reverses, Pergamene pieces continue to outnumber those of other mints, both in modern collections and in ancient hoards, and my incomplete die study of the Pergamene provincial issues suggests that the number of dies employed for the Pergamene cistophori is also greater than that for any other mint. The incomplete die study also indicates that the ratio of extant Pergamene cistophori to obverse dies is very low, particularly in the first century. Almost every new piece adds a new obverse die to the record, and the prospects for establishing a sequence of issues through die linkage are not good. I believe, however, that the evidence provided by cistophoric hoards is in itself sufficient to establish a reasonably accurate relative and absolute chronology for the Pergamene cistophori struck between ca. 123 B.C., when a serpent-entwined thyrsus was chosen as the unvarying civic symbol on the Pergamene reverses,[5] and 67 B.C., when the cistophoric coinage was temporarily suspended. This article is an attempt to establish such a chronology based on hoard evidence.

CATALOGUE

The cistophori issued by Pergamum prior to 67 B.C. can be conveniently divided into three groups as follows:

1. Those with changing symbols in the rev. r. field.[6]
2. Those with a serpent-entwined thyrsus in the rev. r. field and changing initials or monograms between the serpents' heads.

[4] *ECC*, pp. 120–21.
[5] *ECC*, pp. 35-38, 118.
[6] *ECC*, pp. 22-40, ca. 166–ca. 123 B.C.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

3. Those with a serpent-entwined thyrsus in the rev. r. field and changing initials or monograms and ΠΤΥ (*prytaneis*)[7] between the serpents' heads.

When, nearly a century ago, Pinder published his corpus of cistophori, 35 varieties of Group 2 and 3 tetradrachms and one Group 3 drachm were known. The large number reflects the considerable amount of material available for study even then. Nevertheless, today the list of tetradrachm varieties can be expanded to 51 and 1 didrachm and 3 drachm varieties are also documented. The following list comprises all the Pergamene Group 2 and 3 issues known to this author. Group 2 varieties are listed before those of Group 3. Within each group the initials are listed in alphabetical order, except that the two cases where the initials are placed one above the other (Ε and Ε) head the list. Monograms are interspersed wherever the initial letter seems obvious; otherwise they are placed at the end of the group. Each tetradrachm variety is numbered consecutively from 1–51; didrachms and drachms of the same variety are designated by *a* and *b* respectively. One example of each variety is illustrated.[8]

1. Ε (Pinder 91) New York, private collection 12.58↑
2. Ε (Pinder 92) Berlin 12.24 ↑
3. ΑΜ (Pinder 90) Oslo 12.63 ↑
4. ΑΡ (Pinder 102?) ANS-ETN (Asia Minor 1935 hoard, no. 14) 12.30 ↗
5. ΑΣ (Pinder 93) ANS-ETN (Asia Minor 1935 hoard, no. 15) 12.42 ↑
6. Α (Pinder 100) Paris 12.53 ↑

6b. Α (Pinder —) ANS-BYB, *SNGANS* 977, 3.12 ↑

[7] The expansion of ΠΤΥ as *prytaneis* was already recognized by A. X. Panel, *De Cistophoris* (Lyons, 1734), p. 51.

[8] Abbreviations of collections are those used in *ECC*, pp. 3-9. I am grateful to the following curators and collectors who have permitted me to illustrate coins in their care: M. Thompson and N. Waggoner (ANS), M. Caramessini-Oeconomides (Athens), H.-D. Schultz (Berlin), K. Biróné-Sey (Budapest), F. Wielandt (Karlsruhe), L. N. Belova (Leningrad), K. Golenko (Moscow), H. Küthmann (Munich), J. H. Nordbø (Oslo), G. Le Rider and H. Nicolet-Pierre (Paris), G. Dembski (Vienna), C. C. Vermeule, and a private collector in New York City who prefers to remain anonymous.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

7.  (Pinder 101) Leningrad 12.56
8.  (Pinder —) ANS 12.53 ↑
9.  (Pinder —) ANS-ETN (Asia Minor 1935 hoard, no. 58) 12.44 ↑
10. BO (Pinder 94) Berlin 12.59 ↑
11. ΔH (Pinder —) Berlin 12.66 ↑
12. ΔI (Pinder 95) ANS-ETN (Asia Minor 1935 hoard, no. 71) 12.56 ↑
13. EY (Pinder —) New York, private collection 12.59 ↖
14. HP (Pinder —) New York, private collection 12.12 ↑
15. KA (Pinder 96) ANS-ETN (Asia Minor 1935 hoard, no. 102) 12.12 ↗
16. ΛY (Pinder 97) ANS (Asia Minor 1970 hoard, no. 5) 12.69 ↖
17. MA (Pinder 98) Vienna 12.47 ↗
18. ME (Pinder —) ANS (Asia Minor 1955 hoard, no. 13) 12.64 ↗
19. ME (Pinder —) Leningrad 12.60
20. ΜΕ (Pinder —) Munich 12.56 ↑
20a. ΜΕ (Pinder —) Vienna 6.00 ↑ (pierced)
21. MH (Pinder —) ANS-ETN (Asia Minor 1935 hoard, no. 121) 12.49 ↑
22. ΜΗ (Pinder 103) ANS-ETN (Asia Minor 1935 hoard, no. 184) 12.42 ↑
23. NI (Pinder 99) Athens 11.82 ↖
23b. NI (Pinder —) Berlin 2.90 ↑
24. AΠ/ΓΓ (Pinder —) Vienna 11.99 ↗
25. AΠ/ΓΓ* (Pinder 122) ANS-Strauss 12.23 ↑
26. AΠ/ΓΓ in wreath (Pinder 123) Vienna 12.28 ↗
27. AP/ΓΓ (Pinder 104) Vienna 12.16 ↗
28. AC/ΓΓ (Pinder —) Berlin 11.01 ↑
29. AΣ/ΓΓ (Pinder —) ANS-Strauss 12.25 ↑
30. BA/ΓΓ (Pinder 105) Commerce (Asia Minor 1961 hoard, no. 15) 12.31
31. ΔH/ΓΓ (Pinder 106) New York, private collection 12.27 ↗
31b. ΔH/ΓΓ (Pinder 127) Berlin 2.84 ↑
32. ΔI/ΓΓ (Pinder 107) ANS-ETN 12.43 ↑
33. EY/ΓΓ (Pinder 108) ANS-ETN 12.53 ↖
34. IE /ΓΓ (Pinder 109) New York, private collection, 12.49 ↗
35. KA/ΓΓ (Pinder 110) Moscow 12.25 ↗
36. KP/ΓΓ (Pinder 111) Berlin 12.54 ↑
37. KPI/ΓΓ (Pinder —) Moscow 12.55 ↗
38. KT/ΓΓ (Pinder 112) Vienna 12.60 ↑

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

39. ME/ⲅⲧⲩ (Pinder 113) ANS 10.92 ↑
40. ME/ⲅⲧⲩA (Pinder 121) ANS-Strauss 12.07 ↗
41. MH/ⲅⲧⲩ (Pinder 114) New York, private collection 12.15 ↗
42. MH/NⲅⲧⲩO (Pinder —) Vermeule
43. MO/ⲅⲧⲩ (Pinder —) ANS 12.06 ↗
44. MOΣ/ⲅⲧⲩ (Pinder —) ANS-Strauss 12.01 ↑
45. MOΣ/ⲅⲧⲩ in wreath (Pinder 124) Berlin 12.05 ↑
46. ΠA/ⲅⲧⲩ (Pinder 115) Paris 11.98 ↑
47. ΠE/ⲅⲧⲩ (Pinder 116) Paris 12.44 ↑
48. TEY/ⲅⲧⲩ (Pinder 117) Vienna 12.32 ↑
49. TH/ⲅⲧⲩ (Pinder 118) ANS-Strauss 12.40 ↑
50. ΦI/ⲅⲧⲩ (Pinder 119) Budapest 12.30 ↗
51. ⲏⲏ/ⲅⲧⲩ (Pinder 120?) Karlsruhe 10.74 ↑

HOARDS

Cistophori are rarely found in hoards containing coins struck on different weight standards.[9] Nevertheless, hoards comprised solely of cistophori may usually be accurately dated by the presence of Ephesian pieces bearing dates reckoned from the formation of the Roman province of Asia in 134/133 B.C. and/or Tralles pieces dated by the Sullan era beginning in 85/84 B.C.[10] An absolute, as well as a relative, crhonology may thus be established on the basis of hoard evidence, even though most of the hoards contain cistophori exclusively. Nine hoards are of crucial importance for the establishment of the Pergamene chronology.[11] They are (listed in order of burial date) :

[9] For the circulation and hoarding of cistophori, see H. Seyrig, "Questions cistophoriques," *RN* 1963, pp. 25–28; *DCE*, pp. 31–32; C. Boehringer, *Zur Chronologie mittelhellenistischer Münzserien 220–160 v. Chr.*, AMUGS 5 (Berlin, 1972), pp. 47–50; *ECC*, pp. 124–25.

[10] For the dated Ephesian cistophori, see *DCE*, pp. 23–30. For the Sullan era used at Tralles, see K. Regling, "Ein Kistophorenschatz aus der Provinz Brussa," *Frankfurter Münzzeitung* N.F. 34 (Frankfurt am Main, 1932), pp. 506–10.

[11] A summary listing of the contents of hoards 1–6 was given in F. S. Kleiner, "The Giresun Hoard," *ANSMN* 19 (1974), p. 9, n. 10. Hoard 7 has been published by Regling (above, n. 10). For hoard 9, add to the bibliography in *IGCH* 352: M. Caramessini-Oeconomides and F. S. Kleiner, "The Hierapytna Hoard. A Supplement," *RBN* 121 (1975), pp. 5–19.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

1. Asia Minor 1955 (*IGCH* 1458) — 9 pieces of Pergamum Group 2; latest Ephesian pieces (3), 105/104 B.C.; burial ca. 104 B.C.
2. Asia Minor 1971 (*IGCH* 1456) — 2 pieces of Pergamum Group 2; latest Ephesian piece, 105/104 B.C.; burial ca. 100 B.C.
3. Asia Minor 1935 (*IGCH* 1459) — 189 pieces of Pergamum Group 2; latest Ephesian pieces (2), 99/98 B.C.; burial ca. 98 B.C.
4. Asia Minor 1970 (*IGCH* 1460) — 4 pieces of Pergamum Group 2; latest Ephesian piece, 96/95 B.C.; burial ca. 95 B.C.
5. Asia Minor 1966 (*IGCH* 1461) — 14 pieces of Pergamum Group 2; 4 pieces of Pergamum Group 3; latest Ephesian piece, 89/88 B.C.; burial ca. 88 B.C.
6. Asia Minor 1961 (*IGCH* 1462) — 10 pieces of Pergamum Group 2; 12 pieces of Pergamum Group 3, including two varieties not present in hoard no. 5; no Ephesian pieces; burial ca. 85 B.C.
7. Mihaliç 1929 (*IGCH* 1358) — 5 pieces of Pergamum Group 2; 109 pieces of Pergamum Group 3; latest Ephesian pieces (2), 79/78 B.C.; latest Tralles piece, 77/76 B.C.; burial ca. 76 B.C.
8. Asia Minor 1971 (*IGCH* 1464) — 21 pieces of Pergamum Group 3; 1 Pergamene proconsular piece; latest Ephesian piece, 55/54 B.C.; burial ca. 50–45 B.C.
9. Hierapytna 1933 (*IGCH* 352) — 11 pieces of Pergamum Group 3; 2 Pergamene proconsular pieces of 49/48 B.C.; 200 Roman denarii to 46 B.C.; burial ca. 44–42 B.C.

Of these nine hoards only the Mihaliç 1929 and Hierapytna 1933 hoards have been adequately published. A full record of the other seven hoards is given here.

CATALOGUE OF HOARDS

All the catalogued hoards contain cistophori exclusively; all but the Asia Minor 1970 hoard (*IGCH* 1460) are composed solely of tetradrachms. The types are as follows:

Tetradrachms

Obv.: Cista mystica with half-open lid, from which a serpent issues to l.; all within ivy wreath.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev.: Two coiled serpents with heads erect; between them an ornamented bow-case with strap at r., usually containing a strung bow. To l., ethnic (ΠΕ, Pergamum; ΕΦΕ, Ephesus; ΣΜΥΡ, Smyrna; ΤΡΑΛ, Tralles; ΑΠ or ΑΠΑ, Apameia; ΛΑΟ, Laodiceia); other marks as indicated.

Didrachms and Drachms

Obv.: Club, over which a lion's skin is draped; all within wreath.
Rev.: Bunch of grapes, placed upon a vine leaf. To l., ethnic (as above); other marks as indicated.

ASIA MINOR 1955 (*IGCH* 1458)

The hoard was found in Turkey in 1955 and offered for sale to the ANS the same year by an American dealer. The lot of 45 pieces (Pergamum 16, Ephesus 16, Tralles 7, Apameia 5, Laodiceia 1) acquired by the ANS was said to be the complete hoard, but little weight can be given to the dealer's claim. Two of the 45 pieces were clearly added to the hoard after its discovery and are listed separately at the end of the catalogue.

Pergamum

1–2. To r., filleted thyrsus. *ECC* 24a
1. ANS 12.50↑ (*ECC*, pl. 6, 6)
2. ANS 12.65↑

3. Above center, ΠΕ; to r., griffin-crested helmet l.; in l. serpent coil, Υ; in r. serpent coil, Α. *ECC* 34
3. ANS 12.75 ↗ (*ECC*, pl. 9, 10)

4–6. Above center, ΜΗ; to r., winged caduceus. *ECC* 37a
4. ANS 12.67 ↑
5. ANS 12.69 ↑
6. ANS 12.57 ↑ (*ECC*, pl, 10, 3)

The following all have a serpent-entwined thyrsus in the rev. r. field and letters or a monogram (as indicated) between the serpents' heads:

7–8. ⊕
7. ANS 12.48
8. ANS 12.72

9. ΑΣ
9. ANS 12.60 ↗

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

10. ΦΝ
    10. ANS 12.61 ↑
11. ΗΡ
    11. ANS 13.00 ↖
12–14. ΜΕ
    12. ANS 12.58 ↑
    13. ANS 12.64 ↗ (Plate 12, 18)
    14. ANS 12.70 ↗
15. ΝΕ
    15. ANS 12.67 ↗

Ephesus

16. Above l., A (year 1 = 139/138 B.C.); above center, bee; to r., double cornucopiae. *ECC* 35
    16. ANS 12.59 ↑
17. Above center, Artemis facing, holding torches; to r., cock. *ECC* 38
    17. ANS 12.40 ↑

The following all have a torch in the rev. r. field, a date (as indicated) and a symbol (as indicated):

18. Above l., A (year 1 = 134/133 B.C.); above center, bee. *ECC* 40, *DCE* 1
    18. ANS 12.45 ↑ (*ECC*, pl. 17, 5)
19. Above l., B (year 2 = 133/132 B.C.); above center, bee. *ECC* 41, *DCE* 2
    19. ANS 12.55 ↗
20. Above l., Γ (year 3 = 132/131 B.C.); above center, bee. *ECC* 42a, *DCE* 3
    20. ANS 12.43 ↗

21–22. Above l., Γ (year 3 = 132/131 B.C.). *ECC* 42b, *DCE* 4
    21. ANS 12.44 ↑
    22. ANS 12.63 ↗

23–26. Above center, Δ (year 4 = 131/130 B.C.). *ECC* 43b, *DCE* 6
    23. ANS 12.43 ↗ (*ECC*, pl. 18, 4)
    24. ANS 12.73 ↗
    25. ANS 12.33 ↗
    26. ANS 12.43 ↗

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

27. To l., ΔK (year 24 = 111/110 B.C.); above center, gorgoneion. *DCE* 29
    27. ANS 12.50 ↑ (*ANSMN* 18 [1972], pl. 14, 3)
28–30. To l., Λ (year 30 = 105/104 B.C.); above center, bunch of grapes. *DCE* 34
    28. ANS 12.37 ↑
    29. ANS 12.44 ↖
    30. ANS 12.68 ↑

Tralles

31. To r., draped female (?) figure facing. *ECC* 16
    31. ANS 12.49 ↑
32. To r., round shield. *ECC* 19
    32. ANS 12.49 ↑
33. To r., warrior striding r., shield in l., sword in r. *ECC* 20
    33. ANS 12.27 ↑ (*ECC*, pl. 22, 12)
34. Above center, torch; to r., lyre. *ECC* 30
    34. ANS 12.34 ↑ (*ECC*, pl. 24, 8)
35. Above center, fulmen, vertical; to r., eagle r.; below l., ΔΕ . *ECC* 40
    35. ANS 12.38 ↗ (*ECC*, pl. 27, 1)
36. Above center, A; to r., head of Athena r. in crested helmet. *ECC* 44
    36. ANS 12.44 ↑
37. Above center, MAPΣ; to r., owl on amphora r. Pinder —
    37. ANS 12.50 ↗

Apameia

The following all have 🏛 as ethnic in the rev. l. field:

38. To r., flower. *ECC* 13
    38. ANS 12.33 ↖ (*ECC*, pl. 33, 6)
39. To r., human ear r. *ECC* 15
    39. ANS 12.50 ↑
40. To r., owl facing in rectangular frame, below which, M. *ECC* 25
    40. ANS 12.50 ↑ (*ECC*, pl. 35, 8)
41–42. Above l., EI; above r., flute; in l. serpent coil, ΔI. *ECC* 29
    41. ANS 12.70 ↑ (*ECC*, pl. 36, 3)
    42. ANS 12.52 ↑

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Laodiceia

43. To r., wolf r. *ECC* 1
    43. ANS 12.25 ↗

The following pieces, purchased in the same lot, are not part of the hoard:

Pergamum

44. Between serpents' heads, ΜΕ/ΠΥΑ; to r., serpent-entwined thyrsus.
    44. ANS 10.51 ↗

Ephesus

45. To l., ΝΓ (year 53 = 82/81 B.C.); above center, bow in bow-case; to r., torch. *DCE* 54
    45. ANS 11.16 ↗

ASIA MINOR 1971 (*IGCH* 1456)

Nine tetradrachms, said to be part of a hoard found in Turkey in 1971, were seen and purchased in New York City in 1971 by a private collector who prefers to remain anonymous. The homegeneity of the group is established by the uniform tone of the coins and the bits of bronze adhering to most of the pieces. A cast record is on file at the ANS.

Pergamum

1. To r., crested helmet l. *ECC* 25b
   1. New York, private collection 12.43 ↖ (*ECC*, pl. 7, 11)
2. Above center, ⊠; to r., winged caduceus. *ECC* 37a
   2. New York, private collection 12.33 ↑ (*ECC*, pl. 10, 4)
3. Above center, ΑΣ; to r., serpent-entwined thyrsus.
   3. New York, private collection 12.70 ↑
4. Above center, ⍓; to r., serpent-entwined thyrsus.
   4. New York, private collection 12.42 ↑

Ephesus

The following all have a torch in the rev. r. field, a date (as indicated) in the rev. l. field, and a symbol (as indicated) between the serpents' heads:

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

5. IΘ (year 19=116/115 B.C.) and cornucopaie. *DCE* 24
   5. New York, private collection 12.48 ↑ (*ANSMN* 18 [1972], pl. 14, 1)

6–7. KH (year 28=107/106 B.C.) and palm branch. *DCE* 32
   6. New York, private collection 12.50 ↗
   7. New York, private collection 12.56 ↑

8. Λ (year 30=105/104 B.C.) and bunch of grapes. *DCE* 34
   8. New York, private collection 12.53 ↖

Tralles

9. To r., poppy head. *ECC* 21
   9. New York, private collection 12.33 ↗

ASIA MINOR 1935 (*IGCH* 1459)

The hoard was unearthed in Turkey in 1935 and contained at least 232 cistophoric tetradrachms, making the hoard one of the largest finds of cistophori ever recorded. The 232 pieces were forwarded in three lots to E. T. Newell by a correspondent in Istanbul; the coins were examined and a record of the varieties was made by Newell in March and May of 1936 and January of 1937. Newell retained 32 pieces for himself—Pergamum 22, Ephesus 9, Smyrna 1—i.e. one or two examples of almost every variety in the hoard. These coins are now in the ANS collection. Newell also recorded the condition of each piece he examined and his descriptions of the degree of wear of each variety are noted in parentheses in the catalogue. Newell's record of relative wear is important because he purchased only the best pieces, while 200, or 86 percent, of the 232 cistophori he saw were subsequently dispersed.

Pergamum

1. Above center, EP; to r., fulmen, vertical. *ECC* 28 ("worn")
   1. Commerce

2. Above center, ⛪; to r., griffin-crested helmet l.; in l. serpent coil, Y; in r. serpent coil, A. *ECC* 34 ("worn")
   2. ANS-ETN 12.19 ↗

3–6. Above center, ⋈; to r., winged caduceus. *ECC* 37a ("slightly worn")

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

3. ANS-ETN 12.16 ↑
4–6. Commerce

7. Above center, ; to r., winged caduceus. *ECC* 37b ("very good")
7. ANS-ETN 12.45 ↑ (*ECC*, pl. 10, 5)

The following all have a serpent-entwined thyrsus in the rev. r. field and letters or a monogram (as indicated) between the serpents' heads:

8. ("good")
8. ANS-ETN 12.13 ↑

9–13. ("worn to good")
9. ANS-ETN 12.28 ↗
10. ANS-ETN 12.52 ↗
11-13. Commerce

14. AP ("very fine")
14. ANS-ETN 12.30 ↗ (Plate 10, 4)

15-48. AΣ ("very fine to FDC")
15. ANS-ETN 12.42 ↑ (Plate 10, 5)
16–48. Commerce

49–56. or ("very good to very fine")
49. ANS-ETN 12.17 ()
50. ANS-ETN 12.23 ()
51–56. Commerce

57–68. ("very fine")
57. ANS-ETN 12.42 ↑
58. ANS-ETN 12.44 ↑ (Plate 11, 9)
59–68. Commerce

69. ΔH ("worn")
69. ANS-ETN 12.36 ↑

70–101. ΔI ("very fine to FDC")
70. ANS-ETN 12.42 ↑
71. ANS-ETN 12.56 ↑ (Plate 11, 12)
72–101. Commerce

102–6. KA ("very fine")
102. ANS-ETN 12.12 ↗ (Plate 12, 15)
103. ANS-ETN 12.33 ↗
104–6. Commerce

107–12. ME ("good")
107–12. Commerce

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

113. ΜΕ ("good")
113. Commerce
114–20. ΜΕ ("very fine to FDC")
114. ANS-ETN 12.31 ↗
115–20. Commerce
121–83. ΜΗ ("very fine to FDC")
121. ANS-ETN 12.49 ↑ (Plate 13, 21)
122. ANS-ETN 12.53 ↑
123–83. Commerce
184–86. ΜΗ ("very fine to FDC")
184. ANS-ETN 12.42 ↑ (Plate 13, 22)
185–86. Commerce
187–96. ΝΙ ("good to very good")
187. ANS-ETN 12.51↑
188–96. Commerce

Ephesus

The following all have a torch in the rev. r. field, a date (as indicated) in the rev. l. field, and a symbol (as indicated) between the serpents' heads:

197–98. ΔΚ (year 24 = 111/110 B.C.) and gorgoneion. *DCE* 29 ("good")
197. ANS-ETN 12.32 ↖
198. Commerce
199. ΕΚ (year 25 = 110/109 B.C.) and winged caduceus. *DCE* 30 ("worn")
199. ANS-ETN 12.22 ↖
200–1. ΚΘ (year 29=106/105 B.C.) and trident. *DCE* 33 ("good")
200. ANS-ETN 12.24 ↖
201. Commerce
202–3. ΛΒ (year 32=103/102 B.C.) and bucranium. *DCE* 36 ("very fine")
202. ANS-ETN 12.28 ↑
203. Commerce
204–10. ΛΓ (year 33=102/101 B.C.) and owl. *DCE* 37 ("very fine to FDC")
204. ANS-ETN 12.24 ↑

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

205. ANS-ETN 12.34 ↑
206–10. Commerce

211–17. ΛΔ (year 34=101/100 B.C.) and tripod. *DCE* 38 ("very fine to FDC")
211. ANS-ETN 12.33 ↑
212–17. Commerce

218–29. ΛΕ (year 35=100/99 B.C.) and tripod. *DCE* 39 ("FDC")
218. ANS 12.39 ↗ (*ANSMN* 18 [1972], pl. 14, 6)
219–29. Commerce

230–31. ΛC (year 36=99/98 B.C.) and crested helmet r. *DCE* 40 ("FDC")
230. ANS-ETN 12.27 ↑ (*ANSMN* 18 [1972], pl. 14, 7)
231. Commerce

Smyrna

232. Above center, ☛; above r., B; to r., head of Cybele r., turreted. Pinder — ("very fine")
232. ANS-ETN 12.28 ↑

ASIA MINOR 1970 (*IGCH* 1460)

The hoard was found in Asia Minor in 1970 and was purchased by the ANS from a Swiss dealer. It is remarkable both for the rarity of many of the individual pieces and because of its mixed-denomination composition: 21 tetradrachms, 2 didrachms, 7 drachms. Only one other recorded hoard contains cistophoric didrachms—the Şahnalı 1952 hoard (*IGCH* 1328; *ECC*, p. 118f.); no other known hoard includes cistophoric drachms. The contents of the hoard suggest that during the late period Tralles continued to be the primary mint for the striking of cistophoric fractions. The indication of the hoard is confirmed by the considerably greater number of late Tralles fractions in public and private collections today than didrachms and drachms of any other cistophoric mint.

Pergamum

1. To r., filleted thrysus. *ECC* 24a
1. ANS 12.47 ↑

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The following all have a serpent-entwined thyrsus in the rev. r. field and letters (as indicated) between the serpents' heads:

2. ⇞
   2. ANS 12.61 ↗
3. AΣ
   3. ANS 12.61 ↖
4. ΔI
   4. ANS 12.71 ↑
5. ΛY
   5. ANS 12.69 ↖ (Plate 12, 16)

Ephesus

6. To r., candelabrum. *ECC* 10
   6. ANS 12.60 ↑ (*ECC*, pl. 12, 3)
7. To r., eagle r., fillet in beak. *ECC* 25
   7. ANS 12.46 ↖

The following all have a torch in the rev. r. field; other marks as indicated:

8. Above center, E (year 5=130/129 B.C.). *ECC* 44a, *DCE* 7
   8. ANS 12.44 ↑
9. To l., IΔ (year 14=121/120 B.C.); above center, torch. *DCE* 20
   9. ANS 12.48 ↗ (*ANSMN* 18 [1972], pl. 13, 6)
10. Above l., ⊏ K (year 26=109/108 B.C.). *DCE* 77 (drachm)
    10. ANS 3.13 ↑ (*ANSMN* 18 [1972], pl. 15, 5)
11. To l., bee, above which, AΛ (year 31=104/103 B.C.); above center, wreath. *DCE* 35
    11. ANS 12.61 ↑ (*ANSMN* 18 [1972], pl. 14, 5)
12. To l., ΛΘ (year 39=96/95 B.C.); above center, crested helmet r. *DCE* 42
    12. ANS 12.64 ↑ (*ANSMN* 18 [1972], pl. 15,2)

Tralles

13. To r., laureate head of Zeus r. *ECC* 3 (didrachm)
    13. ANS 5.97 ↑
14. To r., wreath. *ECC* 8 (drachm)
    14. ANS 3.08 ↑ (*ECC*, pl. 21, 3)

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

15. To r., wreath, below which, fulmen. *ECC* 9
    15. ANS 12.41 ↑ (*ECC*, pl. 21, 4)
16. To r., ear of grain. *ECC* 12 (drachm)
    16. ANS 3.02 ↑ (*ECC*, pl. 21, 12)
17. To r., humped bull r., filleted, on maeander. *ECC* 15 (didrachm)
    17. ANS 5.62 ↑ (*ECC*, pl. 22, 2)
18. To r., filleted thyrsus. *ECC* 18
    18. ANS 12.42 ↑ (*ECC*, pl. 22, 7)
19. Above r., star; below r., head of Helios r., below which ⋈. *ECC* 39 (drachm)
    19. ANS 2.94 ↑ (*ECC*, pl. 26,10)
20. Above center, ⍋ ; to r., bust of Helios facing. *ECC* 45
    20. ANS 12.30 ↑
21. Above center, AΘHN; to r., fulmen and caduceus, crossed. Pinder —
    21. ANS 12.71 ↑
22. Above center, APTE; below r., uncertain symbol. Pinder — (drachm).
    22. ANS 3.13 ↑
23. Above center, BPIΘ; below r., crab. Pinder — (drachm)
    23. ANS 3.08 ↑

24–25. Above center, ΔION; to r., club. Pinder 152
    24. ANS 12.48 ↗
    25. ANS 12.55 ↗

26–27. Above center, ΠAMM; to r., trophy. Pinder —
    26. ANS 12.60 ↑
    27. ANS 12.65 ↑
28. Above center, ΣΩXA; below r., female (?) head r. Pinder — (drachm)
    28. ANS 2.98 ↑

Apameia

29–30. To l., ⍓; to r., head of elephant r. *ECC* 23
    29. ANS 12.07 ↗ (*ECC*, pl. 34, 11)
    30. ANS 12.52 ↑

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ASIA MINOR 1966 (*IGCH* 1461)

The hoard of 26 tetradrachms (of which one does not belong) was found in Asia Minor in 1966 and was offered for sale by a German dealer. While the coins were in Germany the hoard was examined by P. R. Franke who made a cast record of the 26 pieces. The hoard was subsequently dispersed; 6 tetradrachms were acquired by a New York City collector who prefers to remain anonymous. Franke's casts were generously donated to the ANS where they are now on file.

Pergamum

1–2. Above center,  ; to r., winged caduceus. *ECC* 37b

1. Commerce 12.55 (*ECC*, pl. 10, 7)
2. Commerce 12.54 (*ECC*, pl. 10, 8)

The following all have a serpent-entwined thyrsus in the rev. r. field and letters and/or a monogram (as indicated) between the serpents' heads:

3–4. AM

3. Commerce 12.61
4. Commerce 12.62

5. AΣ

5. New York, private collection 12.58

6–7. or 

6. Commerce 12.41 ()
7. New York, private collection ()

8–11. ΔI

8. Commerce 12.50
9. New York, private collection 12.51
10. Commerce 12.55
11. Commerce 12.60

12–14. MA

12. Commerce 12.54
13. Commerce 12.65
14. New York, private collection 12.67

15. ΜΗ

15. New York, private collection 12.52

16. NI

16. Commerce 12.58

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

17. AΣ/ΠΥ
    17. New York, private collection 12.67
18. ΔH/ΠΥ
    18. Commerce 12.70
19–20. EY/ΠΥ
    19. Commerce 12.65
    20. Commerce 12.68

Ephesus

The following all have a torch in the rev. r. field, a date (as indicated) in the rev. l. field, and a symbol (as indicated) between the serpents' heads:

21. Γ (year 3=132/131 B.C.) and bee. *ECC* 42a, *DCE* 3
    21. Commerce 12.61
22. ΛH (year 38=97/96 B.C.) and crested helmet r. *DCE* 41
    22. Commerce 12.27 (*ANSMN* 18 [1972], pl. 15, 1)
23. MC (year 46=89/88 B.C.) and headdress of Isis. *DCE* 47
    23. Commerce 12.48

Tralles

24. Between serpents' heads, ΔION; to r., ear of grain and poppy head. Pinder —
    24. Commerce 12.48
25. Between serpents' heads, ΠAMM; to r., poppy head and ear of grain. Pinder —
    25. Commerce 12.50

The following piece, purchased in the same lot, is not part of the hoard:

Pergamum

26. Between serpents' heads, TH/ΠΥ; to r., serpent-entwined thyrsus.
    26. Commerce 12.25

ASIA MINOR 1961 (*IGCH* 1462)

The hoard was discovered in 1961, undoubtedly in Asia Minor, and contained at least 25 pieces (Pergamum 24, Tralles 1), of which one Pergamene piece does not belong. Part of the hoard was sold at auction in Munich in May 1962. Six of the pieces were illustrated in the sales

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

catalogue; two of these were acquired by the ANS. Shortly before the auction Christof Boehringer was able to examine all 25 pieces and make a cast record of the hoard which was subsequently generously donated to the ANS.

Pergamum

1. To r., filleted thyrsus; in l. serpent coil, prow r. *ECC* 24b
   1. ANS 12.47 ↑ (Kress 122, 30 May 1962, 372)

The following all have a serpent-entwined thyrsus in the rev. r. field and letters and/or a monogram (as indicated) between the serpents' heads:

2. ⁑
   2. Commerce 12.48
3. AM
   3. Commerce 12.40 (Kress 122, 30 May 1962, 376)
4. ⊠
   4. Commerce 12.78

5–6 BO
   5. Commerce 12.01
   6. Commerce 12.31

7–8. ΔI
   7. Commerce 12.21
   8. Commerce 12.32

9–10. MA
   9. Commerce 12.11
   10. Commerce 12.36

11. NI
   11. Commerce 12.60

12–13. AP/⁑
   12. Commerce 12.27
   13. Commerce 12.45 (Kress 122, 30 May 1962, 380)

14–17. BA/⁑
   14. Commerce 12.03
   15. Commerce 12.31 (Plate 14, 30)
   16. Commerce 12.34
   17. Commerce 12.51

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

18–21. ΔH/ⲣⲣ
18. Commerce 12.04
19. Commerce 12.15
20. Commerce 12.49
21. Commerce 12.51

22–23. EY/ⲣⲣ
22. Commerce 12.46 (Kress 122, 30 May 1962, 383)
23. Commerce 12.50

Tralles

24. To r., star, below which, fulmen; below center, ⲣⲣ. *ECC* 32
24. ANS 12.27 ↑ (Kress 122, 30 May 1962, 386; *ECC*, pl. 24, 12)

The following piece, included in the same lot, is not part of the hoard:

Pergamum

25. Between serpent's heads, ΦI/ⲣⲣ; to r., serpent-entwined thyrsus.
25. Commerce 12.10 (Kress 122, 30 May 1962, 385)

ASIA MINOR 1971 (*IGCH* 1464)

The hoard was found in 1971, probably in Asia Minor, and consisted of at least 32 pieces (Pergamum 22, Ephesus 8, Apameia 1, Laodiceia 1), most of which had been in circulation for many years and were in rather poor condition. The find is noteworthy for including 4 pieces struck under the Roman proconsular authorities. The hoard was offered for sale in 1971 in New York by a British dealer; 11 pieces were acquired by a private collector who prefers to remain anonymous, 4 others by Charles A. Hersh, who is preparing a study of the proconsular cistophori. Casts of all 32 pieces are on file at the ANS.

Pergamum

The following all have a serpent-entwined thyrsus in the rev. r. field and letters and/or a monogram (as indicated) between the serpents' heads:

1–2. AΠ/ⲣⲣ and star
1. New York, private collection 11.11 ↑
2. Commerce 11.35 ↑

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

3–4. IE/⊓
3. Commerce 11.08 ↑
4. Commerce 11.43 ↗
5. KP/⊓
5. New York, private collection 11.15 ↑
6. ME/⊓
6. Commerce 10.02 ↑
7. MH/⊓
7. New York, private collection 11.16 ↗
8. MH/N⊓O
8. New York, private collection 11.02 ↑
9. MOΣ/⊓
9. New York, private collection 10.65 ↖
10. MOΣ/⊓ in wreath
10. New York, private collection 10.13 ↑
11–16. ΠA/⊓
11. Commerce 10.49 ↑
12. Commerce 10.62 ↑
13. New York, private collection 10.70 ↗
14. Commerce 10.88 ↑
15. Commerce 11.00 ↗
16. New York, private collection 11.18 ↑
17–19. TH/⊓
17. Commerce 10.55 ↑
18. Commerce 10.66 ↖
19. Commerce 11.10 ↖
20–21. ΦI/⊓
20. Commerce 10.36 ↗
21. New York, private collection 10.63 ↗
22. C.PVLCHER/PRO.COS; below, ЄYANΘHC/MЄ. Pinder —
22. Hersh 11.07

Ephesus

The following all have a torch in the rev. r. field, a date (as indicated) in the rev. l. field, and a symbol (as indicated) between the serpents' heads, unless otherwise indicated:

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

23. ΞΕ (year 65 = 70/69 B.C.) and poppy between opposed cornucopiae. *DCE* 65
    23. Commerce 11.29 ↗
24. ΞⅭ (year 66 = 69/68 B.C.) and poppy between opposed cornucopiae. *DCE* 69
    24. New York, private collection 11.48 ↗
25. ΞΖ (year 67 = 68/67 B.C.) and ear of grain between opposed cornucopiae. *DCE* 72
    25. New York, private collection 11.56 ↗
26. ΞΖ (year 67 = 68/67 B.C.) and palm branch between opposed cornucopiae. *DCE* 74
    26. Commerce 11.13 ↗
27. Uncertain date and uncertain symbol between opposed cornucopiae. *DCE* 64-74
    27. Commerce 9.76 ↗
28. ΟΘ (year 79 = 56/55 B.C.); above, C.PVLCHRI.AP.F/PRO.COS; below, illegible name. Pinder —
    28. Hersh
29. Π (year 80 = 55/54 B.C.); above, C.PVLCHRI.AP.F/PRO.COS; below, ΣΩΠΑΤΡΟΣ. Pinder —
    29. Hersh 11.62 ↗
30. To l., Ϙ, instead of ethnic; to r., torch; between serpents' heads, $\overline{\text{APA}}$. Pinder 202
    30. Hersh

Apameia

31. To l., ΑΠΑ; to r., double-flute; between serpents' heads, ΜΥΤΑ Pinder —
    31. Commerce 11.70 ↗

Laodiceia

32. To r., winged caduceus; between serpents' heads, ΑΦΟΒΗΤΟΣ/ ΦΙΛΙΠΠΟΥ. Pinder —
    32. 11.48 ↑

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

CHRONOLOGY

The evidence provided by the nine hoards is considerable because almost every variety of reverse initials or monogram is represented in the hoards and because the burial dates of seven of the hoards fall at three– to ten–year intervals between 104 and 76 B.C. In addition, the two latest hoards, buried in the 40s, include several issues not present in the earlier hoards, and thus provide evidence for the varieties struck between 76 and the suspension of the cistophoric coinage in 67, the date of the latest pre-proconsular Ephesian issue.[12]

In the following two tables the 51 varieties of Pergamene cistophori are listed at the left and the number of tetradrachms of each variety present in each of the nine hoards is noted in the relevant column. The issues are listed in the sequence that is suggested by the hoard evidence and other considerations discussed below. The two instances of die linkage are indicated in the Group 2 table and illustrated on Plates 11, 9 and 11, 13 ; 12, 15 and 13, 22. In the Group 3 table a lower case *w* after ΠΥ indicates that the monogram is placed in a wreath.

The earliest Group 2 emissions have traditionally been dated to 134/133 B.C., the date of the formation of the Roman province of Asia and the year an unvarying civic badge was adopted for the reverses of the cistophori of Ephesus. Three recorded hoards buried between 130 and 128 B.C., containing a total of 262 cistophori (89 of Pergamum), do not, however, include any Group 2 pieces. Furthermore, there are 6 Pergamene Group 1 series which are not in any of the pre-128 hoards but are found in later hoards and must be dated to the period ca. 128–123 B.C. The Group 2 cistophori did not begin to be struck until about a decade after the traditional date.[13]

The Asia Minor 1955 and 1971 hoards prove that at least six Group 2 varieties were in circulation by ca. 104 B.C.:

Φ, AΣ, ΔΔ, ΗΡ, ΜΕ, and ΝΕ.

[12] *DCE*, pp. 22–30.

[13] Kleiner (above, n. 11), p. 11; *ECC*, pp. 34–38, 113–19.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Pergamum Group 2 Tetradrachms in Hoards

	Asia Minor 1955 burial ca. 104 B.C.	*Asia Minor 1971 burial ca. 100 B.C.*	*Asia Minor 1935 burial ca. 98 B.C.*	*Asia Minor 1970 burial ca. 95 B.C.*	*Asia Minor 1966 burial ca. 88 B.C.*	*Asia Minor 1961 burial ca. 85 B.C.*	*Mihaliç 1929 burial ca. 76 B.C.*	*Asia Minor 1971 burial ca. 50-45 B.C.*	*Hierapylna 1933 burial ca. 44-42 B.C.*
☉			1						
☉	2	1	5	1	1				
AΣ	1		34	1	1				
🏛	1	1	4[a]		1	1	1		
🏛			4[a]		1				
🏛									
HP	1								
ME	3		6						
ME			1						
ME	1		7						
ΔH			1						
AP			1						
[🏛 EY			12						
NI			10		1	1	1		
ΔI			32	1	4	2	1		
[KA NH			5 3		1				
MH			63						
ΛY				1					
AM					2	1	1		
MA					3	2	1		
BO						2			

[a] Newell's hoard notes do not distinguish between the two forms of monograms; I have divided the eight 🏛 or 🏛 pieces evenly for this tabulation.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Pergamum Group 3 Tetradrachms in Hoards

	Asia Minor 1955 burial ca. 104 B.C.	*Asia Minor 1971 burial ca. 100 B.C.*	*Asia Minor 1935 burial ca. 98 B.C.*	*Asia Minor 1970 burial ca. 95 B.C.*	*Asia Minor 1966 burial ca. 88 B.C.*	*Asia Minor 1961 burial ca. 85 B.C.*	*Mihaliç 1929 burial ca. 76 B.C.*	*Asia Minor 1971 burial ca. 50-45 B.C.*	*Hierapytna 1933 burial ca. 44-42 B.C.*
AC/ΓΥ									
AΣ/ΓΥ					1				
ΔH/ΓΥ					1	4	11		
EY/ΓΥ					2	2	5		1
AP/ΓΥ						2	14		
BA/ΓΥ						4	4		
KA/ΓΥ							2		
TEY/ΓΥ							3		
KP/ΓΥ							5	1	
KPI/ΓΥ							2		1
KT/ΓΥ							8		
MH/ΓΥ							9	1	2
ΔI/ΓΥ							10		
IE/ΓΥ							20	2	2
AΠ/ΓΥ							1		
AΠ/ΓΥ*w*							14		
AΠ/ΓΥ*								2	
ME/ΓΥ								1	
ME/ΓΥA									
MH/NΓΥO								1	
⋈ /ΓΥ									
MO/ΓΥ									
MOΣ/ΓΥ								1	1
MOΣ/ΓΥ*w*								1	1
TH/ΓΥ								3	1
ΠE/ΓΥ									
ΦI/ΓΥ								2	
ΠA/ΓΥ								6	2

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

To this group may be added the following:

Ⓒ, a variant form of Ⓒ, which is present in the 1935 hoard of ca. 98 B.C.;

ⓂⓃ and ⓂⒶ, common and uncommon variants respectively of ⓂⓃ; all three monograms seem to denote the same Greek name, possibly *'Απολλωνίος*; [14]

ΜΕ, a variant form of ΜΕ and ΜΕ.

Of these Ⓒ and Ⓒ are probably to be placed first in the sequence, both because of the stylistic proximity of their dies to those of ca. 128–123 B.C., and because they are exceptions to the horizontal lettering scheme of all subsequent issues. The ΑΣ pieces probably denote the same authority and should come next in the sequence. The remaining varieties have been placed in order on the basis of their relative frequency in the hoards: ΗΡ, one piece in Asia Minor 1955, none in the 1971 or 1935 hoards; ⓂⓃ, ⓂⓃ, ⓂⒶ, one piece in the 1955 find, one in the 1971 hoard, and eight in Asia Minor 1935; ΜΕ, ΜΕ, ΜΕ, four pieces in Asia Minor 1955, fourteen in the 1935 hoard.

To judge from the Asia Minor 1935 hoard of ca. 98 B.C., eight new varieties of Group 2 cistophori were put into circulation between ca. 104 and ca. 98:

ΔΗ, ΑΡ, ⓇⓇ, ΝΙ, ΔΙ, ΚΑ, ΜΗ, and ΜΗ.

ΚΑ and ΜΗ are die linked, confirming the evidence of the hoards. To this group may be added ΕΥ, which shares an obverse die with ⓇⓇ. The nine varieties seem perhaps to be too many for the six- or seven-year period. ΔΗ and ΑΡ, rare issues represented by only one piece each in the 1935 hoard, may have been struck prior to 104 and not included in the small 1955 and tiny 1971 hoards. They have consequently been placed first in this group. ⓇⓇ may be a monogram version of ΑΡ and has been situated next in the sequence. ΕΥ, a rare variety not present in any hoard, is linked to ⓇⓇ. ΝΙ and ΔΙ have been placed next in order because they are represented by ten and thirty-two pieces respectively in the 1935 hoard. ΜΗ belongs last in the sequence on the basis of the 63 tetradrachms in the 1935 find. ΜΗ, a variant form of ΜΗ, and

[14] *'Απολλωνίου* in the genitive case, as on a late cistophorus of Apameia, Pinder 6.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

KA, die-linked to ΜΗ, should come just before ΜΗ in the order of striking.

The Asia Minor 1970 hoard, buried ca. 95 B.C., contains three Group 2 varieties found in earlier burials (⛧, ΑΣ, and ΔΙ), as well as one new issue, ΛΥ, which may consequently be dated ca. 98–95 B.C.

The Asia Minor 1966 hoard includes seven varieties struck before 95 B.C. (⛧, ΑΣ, 🏛, 🏛, ΝΙ ΔΙ, and ΜΗ) and two new issues, ΑΜ (two pieces) and ΜΑ (three pieces), which must have been put into circulation between ca. 95 and ca. 88 B.C., the time of burial of the 1966 hoard. The 1966 hoard also contains three Group 3 issues and consequently the ΑΜ and ΜΑ varieties were probably issued by about 92–90 B.C. ΒΟ, included in the 1961 hoard of ca. 85 B.C., but not in any earlier hoard, must also belong among the latest Group 2 emissions, ca. 95–90 B.C.

The inception of Group 3 is to be dated between ca. 95 B.C., when the 1970 hoard was secreted, and ca. 88 B.C., when the 1966 hoard was formed; probably ca. 92–90 B.C., because three Group 3 issues (ΑΣ/⛫, ΔΗ/⛫, and ΕΥ/⛫) are already present in the hoard of ca. 88 B.C. ΑC/⛫, a variant of ΑΣ/⛫, known in only one specimen in Berlin, should also be placed among the earliest Group 3 issues. The monogram on the Berlin piece is engraved as ⛫ probably an indication that the canonical form had not yet been established. ΔΗ/⛫ and ΕΥ/⛫ are still among the cistophori in the 1961 hoard of ca. 85 B.C. Two new issues are also present in the 1961 hoard, ΑΡ/⛫ and ΒΑ/⛫; they may consequently be dated between ca. 88 and ca. 85.

The Mihaliç 1929 hoard is the largest single find of cistophori ever recorded—271 pieces, of which 114 are Pergamene and 109 are Group 3 issues. It is unlikely that any Pergamene piece not present in this hoard or any of the earlier burials was put into circulation before ca. 76 B.C. The Mihaliç find includes 34 examples of ΔΗ/⛫, ΕΥ/⛫, ΑΡ/⛫, and ΒΑ/⛫, as well as the following new varieties, which may consequently be dated ca. 85–76 B.C.:

ΚΑ/⛫, ΤΕΥ/⛫, ΚΡ/⛫, ΚΡΙ/⛫, ΚΤ/⛫, ΜΗ/⛫, ΔΙ/⛫, ΙΕ/⛫
ΑΠ/⛫, and ΑΠ/⛫ in wreath.

These issues have been listed in sequence according to their numerical representation in the hoard, with two exceptions: ΚΡΙ/⛫, which is probably a variant of ΚΡ/⛫ has been placed contiguous to ΚΡ/⛫;

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

AΠ/ΠΥ, a rare variety, has been placed in sequence before AΠ/ΠΥ in wreath; and AΠ/ΠΥ in wreath, has been placed last because the variant AΠ/ΠΥ*, which is perhaps a related issue, appears only in the post-Mihaliç 1971 hoard. AΠ/ΠΥ, AΠ/ΠΥ in wreath, and AΠ/ΠΥ* may, however, not denote the same authority or if they do, may not indicate contiguous terms of office. The absence of die linkage in Group 3 is unfortunate.

The latest in the sequence of Group 3 issues, datable between ca. 76 and 67 B.C., are those which appear in hoards buried in the 40s, but not in earlier burials, and those which do not appear in any hoards, but are very likely post-76 issues because they are not included in the large Mihaliç find and do not seem to be variants of any of the pre-76 varieties. New issues found in the post-Mihaliç hoards are the following:

AΠ/ΠΥ*, ME/ΠΥ, MH/NΠΥO, MOΣ/ΠΥ, MOΣΠΥ in wreath, TH/ΠΥ and ΦI/ΠΥ.

Probable post-Mihaliç issues which do not occur in hoards are the following:

ME/ΠΥA, ⋈/ΠΥ, MO/ΠΥ, and ΠE/ΠΥ.

All four of these varieties are uncommon. ME/ΠΥA and MO/ΠΥ are very likely variants of ME/ΠΥ and MOΣ/ΠΥ respectively. The sequence of issues proposed here for the post-76 strikings is arbitrary. The varieties are listed alphabetically with the following two exceptions: ΠA/ΠΥ has been placed last because more ΠA/ΠΥ pieces are in the hoards buried in the 40s than any other issue; ⋈/ΠΥ is a monogram which may denote a name beginning with MHN and has been placed after MH/NΠΥO.

The combined evidence of hoards and die linkage thus suggests the following relative and absolute chronology for Pergamum Groups 2 and 3:

ca. 123–104 B.C.

Ꞓ, Ꞓ
AΣ

ꟻ, ꟻ, ꟻ
HP
ME, ME, ME

ca. 104 B.C.

ΔH
AP

ca. 104–98 B.C.

R
EY
NI
ΔI
KA
MH, MH

ca. 98–95 B.C.

ΛY

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ca. 95–92 B.C.
AM
MA
BO
ca. 92–88 B.C.
AC/ⵔⵔ, AΣ/ⵔⵔ
ΔH/ⵔⵔ
EY/ⵔⵔ
ca. 88–85 B.C.
AP/ⵔⵔ
BA/ⵔⵔ
ca. 85–76 B.C.
KA/ⵔⵔ
TEY/ⵔⵔ
KP/ⵔⵔ
KPI/ⵔⵔ
KT/ⵔⵔ
MH/ⵔⵔ
ΔI/ⵔⵔ
IE/ⵔⵔ
ca. 76 B.C.
AΠ/ⵔⵔ, AΠ/ⵔⵔ in wreath, /AΠⵔⵔ*
ca. 76-67 B.C.
ME/ⵔⵔ, ME/ⵔⵔA
MH/NⵔⵔO
ⵔⵔ/ⵔⵔ
MO/ⵔⵔ, MOΣ/ⵔⵔ, MOΣ/ⵔⵔ in wreath
TH/ⵔⵔ
ΠE/ⵔⵔ
ΦI/ⵔⵔ
ΠA/ⵔⵔ

It is to be hoped that additional hoard and die linkage evidence will one day permit even greater precision in chronology, but the dating of almost every variety to a period of ten years or less represents a considerable improvement over the "133–67 B.C." dating which is generally used in catalogues of collections and auctions today.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

POSTHUMOUS HADRIANIC MEDALLIONS

(PLATES 18–26)

MARGRET S. POND ROTHMAN

Medallions provide new—or rather, hitherto unnoticed—evidence for the old hypothesis that Antoninus Pius honored Hadrian by creating a posthumous numismatic issue for him shortly after Hadrian's death on 10 July 138. The existence of such an issue in the coinage was first proposed by H. Mattingly, both to explain the absence of a coin series which manifestly alluded to Antoninus's struggle with the Senate over its reluctance to deify Hadrian and ratify his acts,[1] and to account for the presence of a coin series which did not fit into the author's chronological classification of Hadrianic issues. Mattingly's hypothesis was refuted by P. Strack on the grounds of both historical and numismatic evidence; more recently it has been revived by P. V. Hill in his reexamination of the undated coins of the two emperors.[2] No doubt the debate about the presence of a posthumous coinage will continue.

There is, however, ample evidence that posthumous issues have lain unrecognized among the body of Hadrianic medallions. A study of the medallions struck for both Hadrian and Antoninus, with attention to die

[1] Cass. Dio 69.23; 70.1.2–3. SHA Hadr. 27.2; Ant. 5.2.

[2] H. Mattingly, "Some Historical Coins of Hadrian," *JRS* 15 (1925), pp. 209–22; *RIC* 2, pp. 316–17, 328 (coins with the legend obv. HADRIANVS AVG P P rev. COS III placed in the period from 10 July 138 to early 139); *RIC* 3, p. 4 and Corrigenda, p. xvii (the hypothesis of a posthumous coinage must be qualified); *BMCRE* 4, pp. xlviii-xlix (hypothesis of a large posthumous issue is discarded, but the possibility of sporadic issues prior to Hadrian's consecration is maintained). P. Strack, *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts*, 2 (Stuttgart, 1933), pp. 189–92 (hereafter cited as Strack) (evidence is presented to show that the struggle between Antoninus and the senate was brief; also an angry senate would not permit such issues). P. V. Hill, *The Dating and Arrangement of the Undated Coins of Rome A.D. 98–148* (London, 1970), pp. 78–79, 83 (a series which combines a youthful, idealized portrait of Hadrian with seven reverse types that refer to the deified Trajan and Plotina, Hadrian's military prowess, or Hadrian's building program in Rome, is dated to the latter part of 138).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

links as well as iconography, reveals that Antoninus issued "Hadrianic" medallions to declare the emperor's pious regard for the memory of his predecessor, his intent to continue Hadrian's political and cultural policies, and his role as the crucial link in the chain of dynastic continuity from Hadrian through the young Marcus Aurelius.

The history of a medallic die depicting Victoria driving a biga signals the existence of such posthumous issues.[3] The die was cut for Hadrian; subsequently Antoninus used it on a posthumous medallion for Hadrian, altered it for his own medallions, and then had it recut once more for a medallion honoring the Diva Faustina (Table 1). Since Faustina was consecrated in 141, by which time Antoninus's die cutters were producing a wealth of new medallic types, the continued use of the Victoria die should be interpreted as a reflection of deliberate imperial policy.[4]

TABLE 1
History of Victoria Medallion Die

Gn. 41,3	1[a] HADRIANVS AVGVSTVS	(134–38)	1 COS III P P (Victoria)
Gn. 38,3	"		
Gn. 38,9	2 IMP CAESAR HADRIANVS AVG COS III P P	(138–39)	1 "
Gn. 46,8	A IMP T AEL CAES HADR ANTONINVS AVG PIVS	(139)	1a PM TRP COS II (recut legend)
Gn. 59,4	DIVA AVGVSTA FAVSTINA	(141?)	1b (legend erased; Faustina replaces Victoria)

[a] For reference, numbers and letters are assigned to each die and its variant.

[3] Peter R. Franke first discovered the career of this die, and supervised my subsequent search for posthumous medallions. I should like to acknowledge his generous encouragement, and the continuing assistance of members of the ANS staff, particularly William E. Metcalf. I should also like to thank R. A. G. Carson, G. Dembski, J.-B. Giard, L. Michelini Tocci, and H.-D. Schultz, who reviewed the medallions in their collections at my request.

[4] A die of greater longevity is one of two riders led by a *signifer*, issued by Marcus Aurelius in 161/62 F. Gnecchi, *I Medaglioni Romani* (Milan, 1912) 66,7. (hereafter cited as Gn.); in 167/68 the die was recut for use by Lucius Verus (Gn. 74,5). See H. Dressel, *Die römischen Medaillone des Münzenkabinetts der staatlichen Museen zu Berlin*, ed. K. Regling, 1 (Zurich, 1972), p. 72, (hereafter cited as Dressel). P. R. Franke, "Zur Verwendungsdauer römischer Medaillonstempel," *Chiron* 5 (1975), pp. 407–10.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The Victoria die had been used by Hadrian's mint for a medallion which may commemorate a victory in the Jewish war of 132–35, since its legend obv. HADRIANVS AVGVSTVS rev. COS III P P appears on the coinage of 134–38 (Plate 18,1, Gn. 41,3).[5] In contrast to the conventionality of this medallion, a second version which combines the reverse die with a portrait of Hadrian is aberrant in legend, portrait type, and form (Plate 18,2, Gn. 38,9). First, the IMP CAESAR HADRIANVS AVG COS III P P on the obverse is a title which never occurs in the coinage. IMP CAES HADRIANVS AVG COS II occurs on coins issued in 121, but there is no similar title after Hadrian received the title of PATER PATRIAE early in 128. Second, COS III P P is inscribed on both obverse and reverse dies. Such redundancy does not appear in the coinage, or in the medallions of other emperors. Third, the obvious disparity between the size of the obverse and reverse dies is a relatively rare phenomenon. Both the redundant legends and the unequal die sizes suggest an apparent carelessness which subverts the essential character of medallions as gift items of high artistic quality and particular political or commemorative content. The final anomaly is the extraordinary portrait type, with a very deep bust of Hadrian clad only in an aegis.[6]

The several incongruities of this second "Hadrianic" medallion are signs of posthumous creation, not of an ill-supervised or overworked mint.[7] The ensuing career of the Victoria die itself indicates that the

[5] Strack 2, p. 137. The obverse was also combined with a reverse of Securitas seated (Gn. 39,4); the roughly similar type in the late coinage has been interpreted as an allusion to the punishment of the conspirators against Aelius as Caesar (*RIC* 2, p. 328).

[6] The significance of this particular aegis type needs study. A common type, familiar from the imperial coinage at large after Nero, depicts a small aegis on the bare shoulder of an emperor (e.g. Gn. 55,4 [Antoninus]; 60,7 [Marcus Aurelius]; 83, 10 [Commodus]), but the deep aegis bust is rare; it appears on a medallic coin of Trajan (Strack 1, pl. 7, no. 403), the "Hadrianic" medallion die under discussion, on medallions of Marcus Aurelius and Commodus as Caesars, and on those of Gallienus (J. M. C. Toynbee, *Roman Medallions*, ANSNS 5 [New York, 1944], pp. 133, 223; cited hereafter as Toynbee, *RM*). Use of the aegis to signify world rule had originated in portrayals of Alexander the Great and the Ptolemies, and was first introduced into Roman iconography by Caesar. See A. Alföldi, *Die monarchische Repräsentation im römischen Kaiserreiche* (Darmstadt, 1970), pp. 239–44.

[7] Strack (3, pp. 31–32) first noticed the unique reuse of purportedly Hadrianic dies for half the medallions Antoninus issued early in 139 (Gn. 46,8; 55,1; 55,8; 149,5;

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

unusual "Hadrianic" medallion originated in the mint of Antoninus. The die was next recut to bear the legend PM TRP COS II (traces of the original COS III P P remain) and used for medallions with a portrait inscribed IMP T AEL CAES HADR ANTONINVS AVG PIVS (Plate 19,3, Gn. 46,8). The consequent imperial title dates the medallion early in 139.[8] It is the similarity between this title and the title on the "Hadrianic" medallion, with its anomalous designation of Hadrian as CAESAR, which suggests that Antoninus issued the posthumous medallion shortly after he assumed power, as a means to emphasize the continuity from Hadrian's reign to his own.

Any lingering conviction that Antoninus did not issue a posthumous medallion, and that he reused the reverse simply because there was a dearth of die cutters in his mint, should be eliminated by the appearance of the final medallion in the series. For at some time after the death of Faustina in 141 the mint altered the die radically: with the transformation of Victoria into Faustina with a billowing veil and the erasure of the recut legend, the die became an image of apotheosis (Plate 19,4, Gn. 59,4). The obverse of DIVA AVGVSTA FAVSTINA struck with the altered die provides only a terminus post quem for the new medallion, because Antoninus continued to issue coins in honor of his wife from the time of her consecration until his own death 20 years later.[9] Since the die was reworked in 141 or later, by a mint active in the production of medallions of extraordinary variety and artistry, the revision of the Victoria die—for the second time—surely indicates that for Antoninus the die itself had inherent significance. His own use of the die, as well as his issuing it to honor Faustina several years later, strongly suggests that in its post-Hadrianic career the Victoria die represented dynastic continuity and Antoninus's reverence for the deceased.[10]

149,6); he was undecided as to whether reuse implied a scarcity of die cutters or symbolic intent.

[8] Mattingly (*BMCRE* 4, p. xli) would date issues with this title before March 139, the date when he believed Antoninus assumed the designation as Pater Patriae.

[9] H. Mattingly, "The Consecration of Faustina the Elder and her Daughter," *Harvard Theological Review*, 41 (Cambridge, Mass., 1948), pp. 147–51.

[10] Another medallic die, with Salus at an altar, was also paired with both Hadrianic and Antonine obverses. I think that the Salus die is a second Hadrianic creation that was reemployed by Antoninus because its meaning could be amplified. Hadrian prob-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Other medallions bear the same blatant clues of an Antonine origin as the extraordinary "Hadrianic" Victoria. However lest it appear that the reattributions are based on circular reasoning or inadequate evidence, I shall postpone a discussion of them, and next examine a series of medallions well known for their iconography and great beauty and utterly lacking the signs of posthumous date described above—yet nevertheless demonstrably Antonine.

These medallions are the often-illustrated "Hadrianic" examples with anepigraphic reverses of Aeneas's arrival at Lavinium and Dionysus's triumphal procession. Since the same reverse dies were employed by Antoninus for medallions issued in 139, numismatists have struggled to find an adequate explanation for the reuse of such distinctive images. Analysis of their iconography and die links shows that the Aeneas and Dionysus medallions belong to a series created for Antoninus, to be issued in the names of Hadrian, himself, and Marcus Aurelius. This series presents episodes from Aeneas's founding of Rome and varying images of the triumphal procession of Dionysus; it was issued in 139 and 145 as a declaration of the dynastic succession from Hadrian, through Antoninus, to Marcus Aurelius; and it illustrates Antoninus's scrupulously-balanced revival of the myths of the Greek East and Latin West.

Heretofore the "Hadrianic" Aeneas medallion (Plate 19,5, Toynbee, *RM*, pl. 25,4) has been interpreted as a glorification of the emperor as a new Aeneas and a new Augustus, an allusion that would be especially appropriate for a medallion issued at the dedication of the Temple of Venus and Rome in 136/37.[11] Antoninus's medallion with the same reverse (Plate 20,6, Gn. 55,8) has been considered the first issue in his extensive numismatic celebration of the forthcoming nine hundredth

---

ably issued the Salus medallion (Gn. 147,9) late in his reign to embody the ideas of both *salus augusti* and *salus publica*. Antoninus could invest the type with the new meaning of the well-being of the empire after the brief furor of the transitional period (Gn. 149,5; 149,6).

[11] Strack 2, p. 182. Evidence from brick stamps dates the construction of the Temple from 121–23, or around the 150th anniversary of the founding of the Principate (H. Bloch, *I bolli laterizi e la storia edilizia Romana* [Rome, 1947], pp. 250–53). At that time references to both legends of the founding of Rome occur in the coinage; the types are a sow with piglets and the she-wolf suckling twins (Strack 2, p. 101).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Table 2

Antoninus Medallions of Dionysus and Aeneas Types

Gn. 40,7	3	HADRIANVS AVG COS III P P		2 (Apollo Musagetes)
Gn. 40,9	3			3 (Dionysiac procession)
Toynbee, *RM*, pl. 25,4	3			4 (Aeneas-sow)
Gn. 40,8	4	"		3
Cahn 71, 14 Oct. 1931, pl. 41, no. 1630	B	IMP T AEL CAES HADR ANTONINVS AVG PIVS		3
Gn. 55,8	B			4
Gn. 48,2	B			5 PONT MAX TR POT COS II (*decursio*)
Gn. 55,1	A	" (see Table 1)		3
Gn. 65,8	a	AVRELIVS CAESAR AVG PII F COS II		6 (Dionysiac procession)
Gn. 65,9	b	"		6
Gn. 66,6	a	"		7 (Sacrifice by Aeneas)
Schulman 258, 10-13 June 1974, pl. 41, no. 1751	c	"		7
Gn. 66,10	c			8 (Boar hunt)

anniversary of the founding of Rome in 148.[12] One might think, though, that Antoninus would devise his own medallic iconography to initiate such an important series. Recognizing that Antoninus's mint had used the very die of the "Hadrianic" medallion, Strack expressed uncertainty about its symbolic content under Antoninus: it could indeed refer to the legend of the founding of Rome, or it could link "pius Aeneas" to the pious Antoninus, or it could have no particular meaning at all.[13]

The iconography of the reverse suggests a resolution of the conflicting interpretations. In the upper field of the medallion Aeneas carries Anchises toward a round temple, and an altar (?) and tree fill out the setting; below, the sow and piglets are placed above a twin-towered city

[12] J. M. C. Toynbee, "Some 'Programme' Coin Types of Antoninus Pius," *CR* 39 (1925), pp. 170–77.

[13] Strack 3, p. 32.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

wall. Thus the image presents a synopsis of Aeneas's arrival in Italy and his foundation of a new state. There is, however, a strikingly inaccurate detail in this image: Aeneas carries his aged father, even though Anchises had entered Elysium long before Aeneas arrived in Italy. There is no apparent reason for Hadrian to conflate the legend of the founding of Rome with the theme of the escape from Troy.[14] But Antoninus benefits from the alteration of the story. Introduction of the motif of Aeneas carrying Anchises implies that Antoninus's filial devotion parallels Aeneas's regard for his father.[15] Hence the iconography of the Aeneas type alone is a substantial hint that both medallions which employ it were issued during the reign of Antoninus.

Reattribution of the Dionysus medallions to Antoninus depends primarily upon the evidence of their die links to the Aeneas series; their apparently bland iconography reveals its topicality only after the context is established. The reverse die pictures Dionysus with his thyrsus and Apollo with his lyre, riding together in a wagon pulled by a pantheress and a she-goat, ridden by Amor (Plate 20,7, Gn. 40,8; Plate 20,8, Gn. 40,9; Plate 20,9, Gn. 55,1; Plate 21,10, Cahn 71, 14 Oct. 1931, pl. 41, no. 1630). Dionysiac iconography is equally appropriate for Hadrian and Antoninus. Both emperors encouraged the associations of Dionysiac artists, who honored them each as a "New Dionysus"; for example, Hadrian was the grand agonothete of the Dionysiac festival in Athens in 125 and 132, and Antoninus publicized his interest in the cult through an extensive series of medallions and in coins issued in Asia Minor.[16]

It is the nature of the die links (Table 2) which most convincingly demonstrates that both the Dionysus and Aeneas dies were created in the

[14] J. Beaujeu, *La religion romain a l'apogée de l'empire*, 1: *La politique religieuse des Antonins (96–192)* (Paris, 1955), p. 152 (hereafter cited as Beaujeu) suggested that the Aeneas-Anchises motif was used because it was the most familiar characterization of Aeneas.

[15] Hill (above, n. 2), p. 91 discusses the development of the same theme in the coinage.

[16] Strack 3, pp. 32–34; Beaujeu, pp. 172–73, 308–9; A. Bruhl, *Liber Pater* (Paris, 1953), pp. 186ff. This very image of a Dionysiac procession occurs on Antonine Greek imperials from Tralles and Eumeneia (*BMCLydia*, pl. 36, no. 7; *BMCPhrygia*, pl. 27, no. 11).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

mint of Antoninus as part of the numismatic commemoration of Hadrian in 139.[17] One obverse die of Hadrian was employed with both the Aeneas and Dionysus reverses (Plates 19,5 and 20,8) and one obverse die of Antoninus was used with the same two reverses (Plates 20,6 and 21,10). Even if the mints of Hadrian and Antoninus had only a few medallic portrait dies available at any given time, the odds that both mints would combine a single obverse with the two reverses are very slim. Such an orchestration of the dies suggests that the Aeneas and Dionysus medallions were designed to be issued as pendant pieces, and that they all came from the mint of Antoninus. Since a fortuitous repetition of the earlier coupling is unlikely, and a deliberate repetition would be meaningless, we should conclude that Antoninus issued concurrently the two "Hadrianic" medallions and the two for himself.

Once the reverse dies are reattributed to Antoninus's mint, the specific content of the Dionysiac image yields to interpretation. The image equates Hadrian with Apollo and Antoninus with Dionysus: the relationship between the current emperor and his deified predecessor echoes the hierarchy in the bond between the divinized Dionysus and the deity Apollo, who were so closely linked that they shared the sanctuary at Delphi.[18]

[17] One medallion used at this time, depicting the emperor on horseback (Gn. 48,2), recalls the *decursio* led by Antoninus during the consecration ceremonies for Hadrian (Strack 3, p. 34). The obverse of the medallion is the one used with the Aeneas and Dionysus dies (see Table 2, above).

[18] The identification of Dionysus with the living ruler and Apollo with the deceased has a Hellenistic precedent: Antiochos Dionysos Soter was a title in life, but the posthumous form was Antiochos Apollon Soter (A. D. Nock, "Notes on Ruler Cult, I-IV," *JHS* 48 [1928], p. 33). See also M. Bernhart, "Dionysos und seine Familie auf Griechischen Münzen," *JNG* 1 (1949), pp. 34, 57.

Earlier discussions treat the medallic image solely as a statement of the emperors' active interest in the Dionysiac artists, who organized entertainments throughout the empire (see sources cited above, n. 16). I suspect that the Antonine medallions of Dionysus contain more concrete historical references as well. For example the medallion for Antoninus showing Dionysus and a satyr (Pan?) in the triumphal wagon (Gn. 46,9), struck in 139, may commemorate the emperor's election of Marcus as his Caesar by equating Dionysus with Antoninus and Marcus with Pan; the medallion for Marcus with Dionysus alone in the wagon (Gn. 65,8) honors the Caesar's second consulship (see below, pp. 115-16 and n. 23); and a medallion for Marcus that depicts Dionysus and Ariadne obviously glorifies Marcus and Faustina II (Strack 3, p. 33).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The purpose of the joint issues of the Dionysus and Aeneas types in 139 is clarified by the content of medallions struck in 145. In that year Antoninus issued a pair of medallions for Marcus Aurelius, which combine the same handsome obverse portrait with reverses of a Dionysiac procession (Plate 21,11, Gn. 65,8) and of the Sacrifice by Aeneas (Plate 21,12, Gn. 66,6).[19] Associations with Hadrian and the iconography of medallions issued by Antoninus in 139 permeate these later pieces. For example, the Aeneas medallion continues the analogy between Antoninus Pius and the pious Aeneas: the image is patterned after the Ara Pacis relief of the Sacrifice by Aeneas, but it has been altered to present a cuirassed Antoninus as the sacrificant and to include Ascanius/Marcus as his companion.[20] Moreover a second medallion struck with the die of Aeneas's sacrifice (Plate 21,13, Schulman 258, 10–13 June 1974, pl. 41, no. 1751) employs an obverse portrait of the youthful Marcus which revives the type of the emperor clad in an aegis that Antoninus had created for the posthumous medallion of Hadrian with the Victoria reverse. Finally, Antoninus issued for himself a medallion illustrating the sacrifice of Dionysus (Plate 22,14, Gn. 55,9)[21] at the same time that he issued for Marcus the medallion with the Sacrifice by Aeneas.

The entire series of Aeneas and Dionysus medallions was inspired by Antoninus's desire to celebrate the events of imperial succession. In 139 Antoninus entered his first full regnal year and his second consulship; he presided at the consecration ceremonies for Hadrian; and he heaped honors on Marcus (the quaestorship, designation as Caesar, appointment to share the consulship with Antoninus in 140, and residence in the imperial palace). In 145 Antoninus bestowed on Marcus the

---

The interpretation of these and related medallions will be presented more fully elsewhere.

[19] Dressel (1, p. 66) had noted that both utilized the same obverse die. The two portraits agree in the smallest particular—except that on the Aeneas medallion Marcus sports a slight beard! Once again a die has been reworked in Antoninus' s mint, this time to reflect the maturation of the young Caesar.

[20] Dressel 1, pp. 65–69.

[21] The unusual iconography is discussed by E. Nash, *Pictorial Dictionary of Ancient Rome* (New York, 1961), p. 165; and I. S. Ryberg, *Rites of the State Religion in Roman Art*, Memoirs of the American Academy in Rome, 22 (1955), p. 186, n. 46.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

honors of a second shared consulship, the tribunician power, and marriage to Faustina the Younger.[22] The specific symbolic meaning of the medallions is suggested by the varying iconography of their reverses. The medallions issued in 139 glorify Antoninus and Hadrian as Aeneas and Anchises, and as Dionysus and Apollo; the medallions from 145 develop the analogy between Antoninus and Aeneas and present Marcus as Ascanius or as Dionysus who now rides alone in the triumphal wagon.[23] The selection in 145 of Aeneas and Dionysus types which center on the rite of sacrifice doubtless was motivated by the emperor's wish to emphasize his pious regard for both the gods and his predecessor, the founder of the dynasty which Antoninus so assiduously and publicly advanced during that year.[24]

[22] The thematic development from the 139 to the 145 issues supports the suggestion by A. Birley that in 139 Antoninus announced his intention to share the consulship with Marcus Aurelius in both 140 and 145 (*Marcus Aurelius* [Boston, 1966], p. 67).

[23] The very different iconography for the Dionysus medallions of Antoninus and Marcus in 145 strengthens the hypothesis of specific content. I think the Aurelian medallion celebrates Marcus's assumption of regnal powers; Strack (3, p. 33, n. 77) and Toynbee (*RM*, p. 96) interpreted it as a record of Marcus's marriage. Another medallion in the series is the Antonine work with a reverse correctly portraying the arrival at Lavinium (Gn. 54,9). The medallion should be seen as a reference to the first joint consulship of Antoninus and Marcus in 140.

[24] The sacrifice types introduce the problem of the date for the dedication of the Temple of Divus Hadrianus and Diva Sabina. Most archaeologists date the Temple to 145 (see H. Jordan, *Topographie der Stadt Rom im Alterthum*, ed. Ch. Huelsen, vol. 1, pt. 3 [Berlin, 1907], p. 608, n. 19, and Nash [above, n. 21], pp. 457–61). Their argument is based on the statement in SHA vit. Veri, 3.1: "Qua die togam virilem Verus accepit, Antoninus Pius ea occasione qua patris templum dedicabat populo liberalis fuit." In 145 Lucius was 15, the age at which Marcus had received the toga virilis. However the numismatic material contradicts the literary source. Strack 3, pp. 64–65, 143–48, first drew attention to the varied evidence which indicates that the Temple was not dedicated until 150–51: (1) the coinage of that year includes a temple type, inscribed PIETAS; (2) in the same period there appears a reverse with an image of the equestrian emperor recalling the type Antoninus had used on a medallion associated with the posthumous issues in 139 (Gn. 48,2; see fig. 2); and (3) this equestrian type occurs only on two emissions in which the emperor briefly revives the use of his full name, including the *cognomina* taken from Hadrian (IMP CAES T AEL HADR ANTONINVS [AVG PIVS PP]). The numismatic evidence for a dedication of the Temple in 150–51 is therefore most convincing, and Strack effectively explains the cause of confusion in the *vita Veri*. Since Hadrian was founder of the *domus Augusti*, recol-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The continuing association of the Aeneas and Dionysus legends is more difficult to interpret. Certainly the antipodal heroes were popular throughout the empire, and were depicted in contemporary numismatics. Aeneas represented the founding of Rome, the programs of Augustus, and the pietas of the present emperor; Dionysus suggested the Hellenistic heritage of the empire and the current reverence for Hadrian and Antoninus as the New Dionysus.[25] By linking Aeneas with Dionysus, Antoninus must have intended to display his ecumenical piety and his even-handed revival of the traditions of both the Western and Eastern territories of the empire.[26] Thus this series of medallions holds multiple meanings: Antoninus literally effaced himself to emphasize his regard for both predecessor and designated successor; he used the iconography of Aeneas to celebrate the approaching anniversary of Rome's founding and to link the imperial dynasty with the family of Aeneas; and he displayed his veneration for all aspects of the Greco-Roman heritage.[27]

The medallions struck from the die of Victoria driving a biga and from the Aeneas and Dionysus dies have furnished different proofs of the existence of posthumous issues for Hadrian. The continued use of the Victoria die by a vigorously creative mint signifies that Antoninus employed the Hadrianic die for a programmatic purpose. The mythological medallions confirm that one purpose was to celebrate the concept of dynastic continuity. They also demonstrate that the posthumous medallions need not display abnormalities in type or legend, but may be quite well concealed. Encouraged with the evidence of at least four posthumous medallions, we can look for additional examples.

---

lection of him in 145 is thoroughly explicable without reference to the dedication of the Temple.

[25] G. K. Galinsky, *Aeneas, Sicily, and Rome* (Princeton, 1969), pp. 3–10; T. S. Duncan, "The Aeneas Legend on Coins," *Classical Journal*, 44 (1948–49), pp. 15–29; Strack 3, pp. 32–34; Beaujeu, pp. 172-73, 308–9; Bruhl, *Liber Pater*, pp. 186–91; O. Immisch, "Die antiken Herrscherkult," in Immisch, Kolbe, Schadewaldt and Heiss, *Aus Roms Zeitwende* (Leipzig, 1931), pp. 13–18; Nock (above, n. 18), pp. 21–38.

[26] See comments by Strack 3, pp. 68–69 and J. M. C. Toynbee, "An Imperial Institute of Archaeology as revealed by Roman Medallions," *ArchJ* 99 (1942), p. 43.

[27] Perhaps Vergil's glorification of Augustus also influenced these medallions; the Aeneid does compare Augustus to Liber and Hercules as well (vi, 801–7). If Vergil is a source inspiring the entire medallic series, we are drawn even more strongly to acknowledge the desire to present Antoninus as Augustus reincarnate.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 3

Further Hadrianic Medallions of Antoninus

Gn. 39,2	2	IMP CAESAR HADRIANVS AVG COS III P P	9	COS III P P (Silvanus)
NZ 2 (1870) pl. 2	2		10	(anepigraphic? Silvanus)
Gn. 41,4	5	HADRIANVS AVG COS III P P	10	COS III P P
Gn. 39,1	6	"	10	
Gn. 39,3	7	"	10	
Hess 22 May 1935 (Trau) pl.16, no. 1183	8	HADRIANVS AVGVSTVS	10?	
Gn. 2, p. 5, no. 22	8?	"	11	(anepigraphic? Silvanus)
Gn. 2, p. 5, no. 17 (Coll. Dupré)[a]	?	HADRIANVS AVGVSTVS P P	?	COS III P P (Silvanus)
Gn. 38,3	9	HADRIANVS AVG COS III P P	12	COS II(III?) CONCORDIA
Gn. 42,7		L AELIVS CAESAR	12	
Gn. 38,2	10	HADRIANVS AVG COS III P P	13	COS III P P ANNONA AVGVSTI CERES
Gn. 39,6	10		14	FORTVNAE REDVCI
Gn. 40,6	10		15	(Aesculapius)
Gn. 38,6	11	"	16	COS III (Apollo)
Gn. 2, p. 4, no. 7[a]	?	"	?	"
Gn. 41,1	12	HADRIANVS AVGVSTVS P P	16	
Gn. 144,12	13	HADRIANVS AVG COS III P P	17	COS III PP (boar hunt)
Gn. 3, p. 17, no. 67	14	HADRIANVS AVGVSTVS	17	

[a] No illustration available.

All of the medallions with reverses of Silvanus should be reassigned to the mint of Antoninus. The popularity of the type is reflected in 13 known medallions, which combine several Silvanus dies with eight different obverse portraits of Hadrian. Some are manifestly posthumous. The unusual die with the deep aegis bust of Hadrian inscribed IMP CAESAR HADRIANVS AVG COS III P P, which Antoninus's mint had employed for the posthumous Victoria medallion, was used with two

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

different Silvanus dies as well.[28] Since one of the latter is inscribed with COS III P P (Plate 22,15, Gn. 39,2), there is also a duplicate legend to signal that the medallion is posthumous. The fact that the second reverse appears to be anepigraphic probably is the result of wear or retooling;[29] the legend COS III P P is clear on three other Silvanus medallions struck from the die (Plate 22,16, Gn. 41,4; Plate 22,17, Gn. 39,1; Plate 23,18, Gn. 39,3). Table 3 reveals how many of the medallions display that clue of redundant imperial titles. The number of examples alone should alert numismatists to suspect that the duplications have meaning; surely Hadrian's mint was not so indifferent to the conventions of imperial nomenclature on its valued creations. The lack of the obvious marks of a posthumous date on two other medallions most likely is also a casualty of time. A framed medallion from the Trau Collection [30] is inscribed obv. HADRIANVS AVGVSTVS rev. COS III P P and has a badly worn reverse which may use the same die as the medallion in Plate 22,16 (Gn. 41,4); the second, in Paris, which is heavily retouched, combines an obverse inscribed HADRIANVS AVGVSTVS with an apparently anepigraphic reverse (Gn. 2, p. 5, no. 22).[31]

The proof that these last examples, as well as the rest of the Silvanus medallions, were created in the mint of Antoninus lies in the iconography of the reverse type. The identity of the deity was long a puzzle because it is such an unusual portrayal. In fact the figure has been variously recognized as Apollo, Hermes-Mercurius, or Pan.[32] In an extremely perceptive analysis, H. Dressel was able to secure the identification as Silvanus and to suggest a source for the novel image.[33] The type

[28] The same portrait appears on the counterfeit medallions with a reverse of an equestrian figure and a *signifer* (Gn. 42,2). Dressel (1, p. 442) first drew attention to the dubious origin of these medallions; curators have confirmed that the examples in Paris, London and Vienna are casts, doubtless patterned after a die shared by Marcus Aurelius and Lucius Verus (Gn. 66,7; 74,5 [recut]). See above, n. 4.

[29] Trau Collection, illustrated by a drawing in *NZ* 2 (1870), pl. 2. Reasons for the absence of COS III P P on this piece were first given by J. M. C. Toynbee, "A New Bronze Medallion of Antoninus Pius," *NC* 1940, p. 3.

[30] Hess, 22 May 1935 (Trau), pl. 16, no. 1183.

[31] My information on this medallion comes from J.-B. Giard.

[32] Toynbee (above, n. 29), pp. 3-5.

[33] Dressel 1, pp. 31–32.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

depicts Silvanus dragging along a ram, with a bounding quadruped (a dog?) beside an altar just to the right of the god; the scene is framed by a tree at the left and a shrine at the right. On medallions struck for Antoninus in 140–43, an Apollo has the identical pose, proportions, and attribute, but a tripod and tree replace the altar and shrine.[34] Dressel explained the similarity between the images of the two deities by saying that the Silvanus was patterned on the Apollo type. To account for the appearance of the model at a later date than its altered copy, he suggested that the Apollo originated in the Hadrianic era, and was transformed in the same era into the image of Silvanus, but was copied more exactly in the Antonine Apollo medallion. The relationship between the types is more direct: the same die cutter created both types early in Antoninus's reign. The resemblance of Silvanus to the Apollo Citharoedus[35] on a medallion Antoninus issued in 139 (Plate 23,19, Gn. 48,5), and to the unusual Apollo from 140–43, suggests a deliberate parallelism; in fact the obverse die of Antoninus employed with the Apollo Citharoedus was also used for his medallion of Victoria and one of the medallions of the Dionysiac procession.

It is more startling to discover that the "Hadrianic" medallion with a reverse created to glorify the concord between Hadrian and Aelius is an Antonine issue. Such a date is the only adequate explanation for the peculiarity of this piece. The medallion has a typical HADRIANVS AVG COS III P P obverse and a reverse depicting Hadrian, Aelius, and Concordia, with the legend COS II(III?) CONCORDIA (Plate 24,20, Gn. 38,3).[36] The image alludes to Hadrian's adoption of Aelius in the spring/summer of 136, and the same die was employed for a medallion issued for Aelius at that time (Plate 24,21, Gn. 42,7). One would assume that the medallions were issued as companion pieces, were it not for several disturbing features of the "Hadrianic" example. On the medallion for Aelius the legends are congruent, the dies have equal

[34] Ill. Dressel 1, p. 32, Abb. 6. A variant, then in the stock of Messrs. A. H. Baldwin & Son, is illustrated in Toynbee (above, n. 29), pl. 1, 2.

[35] The Apollo Citharoedus type in sculpture is illustrated by W. Amelung, *Die Skulpturen des Vaticanischen Museums, Tafeln* 1 (Berlin, 1903), pl. 7, no. 41.

[36] Gnecchi (2, p. 3, no. 4) gave the legend as COS III, but it was questioned by Strack (2, no. 485b). Both this and the Annona medallion discussed below are genuine struck pieces, although they exhibit some retooling (R.A.G.Carson).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

diameters, and the letter style is uniform, but on the "Hadrianic" medallion the legends are redundant, the letter style differs, and the dies are of different sizes. Such sloppiness is inconceivable in only one of a pair of medallions which carry the important message about Hadrian's initial choice of a successor. It is most likely that Antoninus issued the "Hadrianic" medallion, with its allusion to the former successor-designate, to commemorate the consecration of Hadrian; at that time Hadrian's ashes were placed alongside the remains of Aelius, Sabina, and Antoninus's three deceased children. Perhaps the medallion also records Antoninus's promise to Hadrian to adopt Aelius's son Lucius Verus along with Marcus Aurelius.

The medallions discussed to this point present the strongest cases for a reattribution to the reign of Antoninus, in that all of them bear more than one clue—in die links, redundant legends, iconography, or style—to indicate their posthumous date. However I would argue that the presence of redundant legends is itself a sufficient idiosyncracy to mark out additional pieces as Antonine creations. For if the redundancy does not occur even in the regular Roman coinage, where mass production led to greater opportunities for error, there must be a reason for its appearance in the closely supervised, highly valued medallic issues. A priori, carelessness in the mint cannot be an adequate explanation. Unfortunately the difficulty in assigning the following medallions to the Antonine era is that all other evidence is circumstantial. Hence there is the greatest likelihood, but not an absolute certainty, that they are posthumous.

The first of these medallions has a reverse of Annona standing before Ceres, inscribed COS III P P ANNONA AVGVSTI CERES (Plate 24,22, Gn. 38,2). Like the Concordia medallion, this piece carries political content which is entirely appropriate to the events of Hadrian's last years; it could be the medallic counterpart of the "annona" copper coinage, which has been linked to the dedication of the Temple of Venus and Rome.[37] Moreover the obverse die originated in Hadrian's reign, it was also issued with a reverse proclaiming FORTVNAE REDVCI, in commemoration of the emperor's return to Rome (Gn. 39,6),[38] and with

[37] *RIC* 2, p. 327.
[38] Strack 2, p. 130.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

a reverse of Aesculapius (Gn. 40,6; 41,2). But if we accept redundant imperial titles as a reliable means for identifying the posthumous creations, the Annona medallion should be reattributed to Antoninus. It is difficult to discern any particular reason for issuing such a medallion posthumously, since the annona figured in any emperor's activities on behalf of the Roman people. However there is circumstantial evidence to support the hypothesis that Antoninus issued the medallion in 139, concurrently with an annona type in the coinage: a sestertius with an annona reverse uses the same obverse die that had been used for several medallions of Antoninus that were associated with the posthumous issues (Gn. 46,8; 55,1; 48,5).[39] Hence the "Hadrianic" medallion may underscore the continuity between the domestic programs of the two emperors.[40]

Perhaps the most puzzling is a medallion that depicts an imperial boar hunt and employs the legend obv. HADRIANVS AVG COS III P P rev. COS III P P (Plate 25,23, Gn. 144,12). Other medallions which use the identical reverse die (Plate 25,24) and a different die with an almost identical reverse type (Plate 25,25)[41] bear the titles obv. HADRIANVS AVGVSTVS rev. COS III P P common to the coinage from 132–34 or later.[42] Therefore it is natural to consider the three medallions to be simultaneous issues and to associate them with the lion hunt medallions from 128–32 (Gn. 146,3; 146,4) and the Hadrianic tondi of similar iconography on the Arch of Constantine.[43] Yet the abnormal duplication of COS III P P occurs on the first medallion. Although there are no other internal clues that the medallion is Antonine, the recurrence of a boar hunt

[39] Toynbee, *RM*, p. 32, pl. 1,5.

[40] However Antoninus also took pains to distinguish his attitude toward the provinces from Hadrian's. See Strack 3 (pp. 39-43) and *BMCRE* 4 (pp. lxxix-lxxx), who correctly point out the divergence between the "province" coin series of the two rulers (in contrast to the analysis by J. M. C. Toynbee, *The Hadrianic School* [Cambridge, 1934], pp. 144–52).

[41] Plate 25, 25 = Gn. 3, p. 17, no. 68 (W. Froehner, *Les Médaillons de l'Empire Romain* [Paris, 1878], middle of p. 39); Plate 25, 26 = Gn. 3 p. 17, no. 67 (Froehner, bottom of p. 39).

[42] *RIC* (3, p. 312) placed the legend obv. HADRIANVS AVGVSTVS rev. COS III P P in the years 132-34; however Strack's study of the coinage has shown that this title could appear until the end of Hadrian's reign (Strack 2, pp. 27–28).

[43] Dressel 1, pp. 33–34; Strack 2, p. 129; Toynbee, *RM*, p. 219, n. 80.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

type on a medallion Antoninus issued for Marcus Aurelius in 145 (Plate 25,26, Gn. 66,10)[44] suggests that the emperor had endowed the iconography of the reverse with commemorative content. For the medallion of Marcus Aurelius is replete with memories of authentic and posthumous Hadrianic medallions: not only does the theme of the boar hunt recall Hadrian's passion for the sport, but its anepigraphic reverse is patterned after one of Hadrian's lion hunt medallions (Gn. 146,4), and its image of Marcus presents the young Caesar in an aegis, according to the posthumous portrait type which Antoninus had devised for Hadrian (Plate 18,2). Moreover this unusual portrait die of Marcus was also employed for a medallion with the Sacrifice by Aeneas, from the 139–45 series discussed above (Plate 21,13).[45] In light of the existence of the medallion for Marcus Aurelius, three explanations for the Hadrianic (?) medallion present themselves: (1) Hadrian's mint for once had erred in the title forms; (2) Antoninus created the medallion as part of the lavish medallic issue honoring Hadrian in 139; or (3) Antoninus issued the medallion in 145, alongside the piece for Marcus Aurelius. Since the first explanation denies the very nature of Roman medallions, and the third is postulated on the survival of a die for from six to thirteen years, we should prefer the hypothesis that the boar hunt medallion was produced in 139.

Finally, some, if not all, of the medallions with Apolline iconography are posthumous. One reverse die with an image of a nude Apollo holding his bow and a branch (?) in a setting with a vase on a table to the left and a tripod and tree to the right, inscribed COS III, was combined with three different obverse portraits. Two still display the designation as COS III on the obverse as well as the reverse (Plate 26,27; Gn. 38,6:

[44] Gnecchi illustrates a second medallion (Gn. 66,9), which Strack does not list. It is of dubious origin: the obverse combines a portrait of an unusually mature, bearded Marcus with a legend (AVRELIVS CAESAR AVG PII F) that would date the medallion ca. 145, but there is no continuation of the imperial title on the reverse to date the work more precisely.

[45] I hope to show elsewhere, in a discussion of Antonine medallic iconography per se, that the striking of the unusual portrait die with these two reverses was not a fortuitous combination. The same obverse was used a third time, for a medallion with a reverse of Athena and Poseidon (Gn. 65,1), a die Antoninus also used for his own medallion (Gn. 52,5), and one that carried dynastic content (Hill [above, n.2], p. 82).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

also Gn. 2, p. 4, no. 7), and the obverse of the third medallion (Plate 26,28, Gn. 41,1) is so badly worn that the title may no longer be visible.[46] If indeed the titles on the obverse are legible in toto, the history of the die corresponds to those of the Victoria and Salus reverses discussed above (pp. 107-10 and n. 10); Hadrian created the die, and Antoninus continued to issue it in Hadrian's honor.

It is possible that a medallion from another Apollo die, an anepigraphic image of Apollo Musagetes (Plate 26,29, Gn. 40,7), may also be posthumous, even though it exhibits none of the customary clues to such an origin. The evidence for a late Hadrianic date is the use of an obverse inscribed with the conventional imperial titles and the use of a type which could allude to Hadrian's enthusiastic practice and encouragement of the arts. The first hint that this medallion may be posthumous, not late Hadrianic, emerges from a survey of the iconography of all the Hadrianic issues. It is noteworthy that an Apollo type never occurs in the regular Roman coinage, seldom in the coinage from Asia Minor (an Apollo Citharoedus, Apollo Didymeus, and an Apollo standing left, holding a raven and a branch),[47] and only on the Apollo medallions mentioned above and the example under discussion. Diana, on the other hand, is one of the deities most frequently honored in Hadrianic numismatics.

In contrast, Apollo figures frequently in both the coins and medallions of Antoninus. For the first time in a century Apolline iconography appeared on the aurei,[48] and the early medallic issues honored the god through the Apollo Citharoedus of 139 and the Silvanus-like Apollo of 140–43. In addition to the popularity of Apollo types, there is another hint that the Apollo Musagetes is Antonine. To my knowledge, its obverse portrait of Hadrian was used on only two other occasions, for the posthumous medallions with the Aeneas and Dionysus reverses (fig. 2 and Plates 19,5 and 20,8). Certainly it is possible that Antoninus was developing an iconography that Hadrian had introduced at

[46] Gnecchi 2, p. 4, no. 8 gives the legend as obv. HADRIANVS AVGVSTVSPP rev. COS III. Toynbee (above, n. 29), p. 7 suggested that the absence of COS III on the portrait die may be due to wear.

[47] *RIC* 2, p. 400, no. 482 (pl. 14, no. 299), nos. 483, 484; Beaujeu, pp. 191–98.

[48] *BMCRE* 4, pp. lv–lvi; Strack 3, p. 85. The types occur from 140–61.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the very end of his reign.[49] However I would suggest that Antoninus issued both the Apollo Musagetes and the nude Apollo type in the name of Hadrian. He may have issued concurrently the "Hadrianic" Apollo Musagetes and his own Apollo Citharoedus;[50] the two medallions would then express the consonance between the cultural policies of the two emperors.

Before considering the implications of the posthumous medallions, it may be useful to summarize their character. Although the recipients of course knew that the medallions were issued by Antoninus, the modern observer must rely on clues of iconography, legends, die links, and style to identify the posthumous issues. The superficial content of the medallions is extremely various. The medallions of Victoria, Annona, and Concordia[51] convey ostensibly political themes, and the medallions of Aeneas, Dionysus, Silvanus, and Apollo illustrate religious and antiquarian interests. Also, the dies used for these medallions have diverse origins. Antoninus reused dies which had been made during Hadrian's

[49] The Apollo medallions would then represent a marked development from the content of previous Hadrianic issues, since the bulk of the mythological medallions—the Aeneas, Dionysus, and Silvanus types—have proved to be posthumous. What remain are medallions of Diana (Gn. 40,5; 144,7), Hercules Gaditanus (Gn. 144,6; 42.1), an unusual seated Pan (Gn. 146,10), and Isis (Gn. 147,10; 147,11?).

There are also extraordinary Hadrianic medallions of the Contest of Athena and Poseidon. Three different medallions utilize the reverse die, which may copy a classical Greek relief (Toynbee [above, n. 26] pp. 41–42; C. Robert, "Das Schiedsgericht über Athena und Poseidon," *Mitteilungen des deutschen Archäologischen Instituts*, 7 [Athen. Abt., 1882], pp. 48–58; H. A. Thompson, "The Odeion in the Athenian Agora," *Hesperia*, 19 [1950], p. 123). Since all bear the legends obv. HADRIANVS AVGVSTVS rev. COS III typical of 125–28, they may refer to Hadrian's visits to Athens in 124/25 and 128/29. No comparable mythological image in Hadrianic medallions appears until the late years (if then), and there is no other instance in which the same die was used for medallions of *both* bronze (Gn. 146,8; 146,9) *and* silver (G. Mazzini, *Monete Imperiali Romane*, 1 [Milan, 1957], pl. 32, no. 475). The Contest medallions probably should be viewed as an experiment in the development of the new art of medallions.

[50] By choosing the type of Apollo Citharoedus for himself, Antoninus continues the revival of Augustan themes which forms a leitmotif throughout his issues. (For examples of the Augustan Apollo Citharoedus, see *BMCRE* 1, pl. 3, no. 15; pl. 11, no. 7; pl. 12, no. 5).

[51] Perhaps the boar hunt medallion should also be classed as a political type, since the theme of the hunt alluded to imperial *virtus* in general, as well as to Hadrian's love of the sport in particular.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

reign (the Victoria, Concordia, boar hunt (?), Apollo (?), and presumably portrait dies); he created dies that were to be used solely for posthumous medallions (Silvanus dies, and the aegis portrait of Hadrian); and he created other dies that were to be used for medallions issued concurrently for himself and Hadrian (the Aeneas and the Dionysus and Apollo dies). Finally, there are a great many posthumous medallions. In fact more than one-sixth of the Hadrianic pieces listed in Gnecchi's corpus of Roman medallions (22–25 out of 131 different medallions) are actually Antonine.[52]

All of the posthumous medallions were created to celebrate the consecration ceremonies for Hadrian in 139. In effect Antoninus utilized the medallions to underscore his success in the earlier conflict with the Senate over its unwillingness to deify Hadrian, since members of the senatorial class would number among the recipients of the posthumous pieces. The medallions with the Victoria reverse, the triumphal procession of Dionysus and Apollo, and Aeneas carrying Anchises into Italy dramatized with particular éclat Antoninus's achievement in enshrining the memory of Hadrian. However the medallic iconography which the emperor created for his predecessor and himself is also a well-developed statement of policies which remained paramount throughout his long stewardship of the empire—the renewal of Rome's religious and historical traditions, and the maintenance of an imperial dynasty.

We do not adequately appreciate the fervor of Antoninus's encouragement of a philhellenic, retrospective culture if we say that his aim was to continue Hadrian's policies, altering them only by adding an Italic emphasis.[53] For the erroneous classification of the posthumous medallions has produced a slightly distorted impression of Hadrian's programs. Thus, the iconography of Hadrian's medallions has been used to prove that the emperor introduced the worship of Hellenic deities

[52] The reattributions slightly alter our picture of the history of medallic art. It is still true that the production of medallions suddenly flowered during the reign of Hadrian, to bloom magnificently in the Antonine era. However the discovery of the posthumous medallions illuminates the truly remarkable creative energy of Antoninus's mint.

[53] See above, n. 26; A. Garzetti, *From Tiberius to the Antonines*, trans. J. R. Foster (London, 1974), pp. 448, 467.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

among the circles of the imperial aristocracy.[54] Yet Hadrian's antiquarian and philhellenic enthusiasms, for which there is superabundant evidence elsewhere, did not penetrate very deeply into his numismatics. Many of the medallions which seem to express this cultural policy—the Aeneas, Dionysus, Silvanus, and Apollo (?) types—are Antonine.[55] Once these posthumous medallions are withdrawn from the Hadrianic material, a far different numismatic program emerges. The dominant iconography develops familiar themes of imperial government, such as the VIRTVTI AVGVSTI (Gn. 146,3; 146,4; 146,7), Felicitas (Gn. 40,3), GENIVS POPVLI ROMANI (Gn. 39,7; 39,8; 39,9), or the Capitoline Triad (Gn. 146,5; 146,6). It becomes apparent that the emperor viewed medallions as prestigious counterparts to his coin issues, rather than as a form of numismatics designed to carry a distinct cultural message.[56]

Hence it was Antoninus who first used the art of medallions systematically to honor the Greek as well as the Latin heritage of the empire. By issuing medallions for Hadrian with an iconography which proclaims this cultural program, the emperor both formulated a policy and acknowledged its source in the reign of Hadrian.

Antoninus also utilized the posthumous medallions to present his own self-portrait. The iconography of the medallions he issued in his own name and that of Hadrian reveals just why both ancient and modern historians have been uncertain about the specific reason for the Senate's

[54] Beaujeu, pp. 209–15, especially p. 209.

[55] The remaining Hellenic types are : Diana (Gn. 40,5; 144,7), who may be associated with the hunt; Hercules (Gn. 42,1; 144,6), frequently the Hercules Gaditanus of the emperor's ancestral home (Strack 1, pp. 95–104; 2, pp. 85–88); Aesculapius (Gn. 40,6); contest of Athena and Poseidon (Gn. 146,8; 146,9) (see above, n. 49); and Pan (Gn. 146,10), whose meaning is obscure (Beaujeu, p. 211).

In medallions the Roman revival is limited to a type of the wolf and twins (Gn. 38,7), issued on the 150th anniversary of the Principate, and to an image of ROMVLO CONDITORI (Gn. 145,7), issued at the consecration of the Temple of Venus and Rome (Strack 2, p. 105).

[56] The medallion types are related to, but not identical with, coin types. See Strack 2, pp. 200–1. (Once the posthumous pieces are removed from consideration, the independence of Hadrian's later medallions from the coinage is less notable than Strack believed.)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

bestowing the honorific epithet "Pius" on the emperor.[57] It is apparent that Antoninus meant the title to refer to his fundamental character, rather than to any single facet of his rule. The emperor's *pietas erga patrem* is demonstrated by the very act of striking the posthumous medallions. His *pietas erga cives* is demonstrated by the medallions which stress his intent to maintain the imperial dynasty established by Hadrian (e.g. the Concordia and Victoria medallions, and the Aeneas and Dionysus series), to carry out his predecessor's political programs (the Annona medallion), and also to return to the Augustan foundations of the empire (the Aeneas and Apollo medallions). Finally, his *pietas erga deos* is demonstrated by the introduction of the traditional deities into the repertoire of medallic images.

In conclusion, the discovery of the posthumous issues had led us to realize the extent to which Antoninus Pius was responsible for fashioning medallions into an eloquent and prized vehicle for imperial propaganda. Perhaps just as noteworthy as the creation of medallions to honor Hadrian are the long-range planning of medallic issues, whereby iconography devised at the beginning of Antoninus's reign was developed over a span of years, and the preservation of a medallic die itself (the Hadrianic Victoria) as a treasured artifact with symbolic associations.

[57] SHA vit. Hadr. 24.3-5; 27.2-4; Garzetti (above, n. 53), p. 466; M. Hammond, *Imperial Elements in the Formula of the Roman Emperors during the First Two and a Half Centuries of the Empire*, Memoirs of the American Academy in Rome, 25 (1957), pp. 45–47 (with pertinent bibliography).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

THE ANTIOCH HOARD: A SUPPLEMENT

(PLATE 27)

WILLIAM E. METCALF
and PAUL MUNRO WALKER

In the last number of this journal a lot of 450 antoniniani, part of a large hoard found near ancient Antioch on the Orontes, was described and analyzed.[1] A second group of 82 coins,[2] undoubtedly part of the same find, was recently seen in England, where an independent listing of dies was made. The second lot, whose composition confirms the picture of the entire hoard suggested by the first, is here recorded.

The order of the original publication is followed as far as possible. New dies are designated by italics and inserted where they would belong in the original sequence with the addition of the letters "a," "b," etc. All new dies and die combinations are illustrated.

Obv.	*Rev.*	*Examples*	*Recorded weights*
		UNMARKED OFFICINA	
		MARTEM PROPVGNATOREM – / – (64)	
		(*RIC* Trebonianus 84, Volusian 219)	
T1	2	2	3.67 ↑
T1	3	1	3.65 ↓
T2	5	1	4.00 ↑
T3	5	1	4.20 ↑
T3	6	5	3.50 ↑
T3a	5	1	3.58 ↓

[1] W. E. Metcalf, "The Antioch Hoard of Antoniniani and the Eastern Coinage of Trebonianus Gallus and Volusian," *ANSMN* 22 (1977), pp. 71-94.

[2] Briefly noted in Metcalf (above, n. 1), p. 78, n. 3.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.	*Rev.*	*Examples*	*Recorded weights*
T3a	7	2	3.02 ↑
T4	7	1	3.53 ↓
T5	8	3	3.44 ↑
T5	9	1	3.93 ↓
T6	10	1	4.21 ↓
T7	12	3	3.71 ↑
T9	12	2	3.83 ↑
T9a	12	1	2.84 ↓
T8	13	1	4.20 ↑
T10	14	3	4.69 ↑
T12	18	1	3.72 ↑
T13	19	10	3.67 ↑
T15	28	1	3.77 ↑
T17	24	2	4.37 ↓
T20	26	1	2.93 ↓
T20	27	4	4.29 ↓, 3.66 ↓
T20	28	1	3.60 ↑
T21	28	1	3.80 ↑
T22	14	2	3.99 ↓
T22	30	8	4.29 ↑, 3.70 ↑
T25a	*33a*	1	4.44 ↑
T25b	*33b*	1	4.23 ↑
V3	34	1	3.77 ↑
V3a	*34a*	1	3.72 ↓
	FELICITAS PVBL – / – (2) (*RIC* Trebonianus 82)		
T26	*35a*	1	3.55 ↑
T28a	*37a*	1	4.00 ↓
	SECOND OFFICINA		
	IVNO MARTIALIS •• / •• (3) (*RIC* Trebonianus 83)		
T36	47	2	3.35 ↑
T38	*47a*	1	4.02 ↓

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv.	*Rev.*	*Examples*	*Recorded weights*
		ADVENTVS AVG •• / •• (1) (*RIC* Trebonianus 79)	
T37	48	1	3.90 ↓
		FELICITAS PVBL •• / •• (1) (*RIC* Trebonianus 82)	
T43	54	1	4.12 ↑
		MARTEM PROPVGNATOREM •• / •• (7) (*RIC* —)	
T38	57	7	4.30 ↑
		VICTORIA AVG •• / •• (1) (*RIC* Trebonianus 93)	
T42	58	1	3.44 ↓
		THIRD OFFICINA	
		FELICITAS PVBL ••• / ••• (1) (*RIC* —)	
V4	60	1	4.85 ↑
		SIXTH OFFICINA	
		IVNO MARTIALIS VI/VI (1) (*RIC* —)	
T46a	*61a*	1	3.36 ↑
		SEVENTH OFFICINA	
		AEQVITAS AVG [VII?]/VII (1) (*RIC* Trebonianus 80)	
T46b	*61b*	1	4.68 ↓

The distribution of the 82 new coins confirms the eccentricities of the hoard suggested by the earlier lot, such as the dominance of the MARTEM PROPVGNATOREM type and the unmarked officina, and the

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

almost complete absence of coins from the first and third through seventh officinae. The similarity of the two groups even extends down to small details. For example, some die combinations abundantly represented in the first lot were also numerous in the second. The new lot had 5 examples of die combination T3–6, of which 11 specimens had been recorded; there were 10 examples of T13–19, which occurred 34 times in the first lot. T22–30, which occurred 37 times in the first lot, was represented by 8 examples in the second, and T38–57, of which 32 examples in the first lot provided the first evidence for MARTEM PROPVGNATOREM ••/ ••, was represented by 7 more specimens in the second.

Only 12 of the 82 coins were struck from dies not represented in the first lot. Of these 7 provided evidence for both new obverse and new reverse dies, while 4 coins represented the combination of 3 new obverse dies with three known reverses, and one known obverse die was combined with a new reverse. There were four new combinations of known dies (T15–28, T20–26, T20–27, T22–14); these new pairings tighten up the die linkage somewhat and confirm the close-knit character of the group. The sixth and seventh officinae, whose coins were entirely lacking in the first lot, are now represented by single specimens.

The additions are obviously trifling. There is nothing to alter the picture of a large and closely die-linked hoard consisting entirely of coins of the last Antiochene issue of Trebonianus Gallus and Volusian; coins with rev. MARTEM PROPVGNATOREM and struck in the unmarked officina were predominant. The second officina was also well-represented, but coins from the other workshops were present only in minute quantities.[3]

CORRIGENDUM

To *ANSMN* 22, p. 73, n. 1: for "3" read "5."

[3] The authors wish to thank R. A. G. Carson, Keeper of Coins at the British Museum who generously provided the photographs and details concerning weights and die axes.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

A FIRM ATTRIBUTION OF LATIN GOLD COINAGE TO TWELFTH-CENTURY JERUSALEM

(PLATES 28–31)

J. D. BRADY

In 1967 George Miles published 17 cut fragments of gold coins bearing Latin inscriptions.[1] Seven had been excavated at ʿAmwās el-Qubeibeh, about 33 km northwest of Jerusalem. With them were found 8 Crusader imitations of the dinars of Faṭimid Calif al-Āmir, who ruled from A.D. 1101 to 1130. The other 10 fragments, now the property of the American Numismatic Society, came from a single source who reported that with 25 imitation dinars they were the whole of a hoard from Maraş in Turkey, which is about 140 km due north of Aleppo. All 17 are of a single type, showing on one side a six-pointed star with surrounding inscription, and on the other a sort of gridiron or matrix with inscription. The coin type was otherwise unknown either in additional fragments or in a single intact specimen. Earlier, Bellarmino Bagatti, in first publishing the seven fragments from ʿAmwās showing 25 letters, had suggested that the inscription on one side might be

[1] G. C. Miles, "Some Hoards of Crusader Bezants," *ANSMN* 13 (1967), pp. 189–203; see also J. Yvon, "Orient Latin et Arménie" in *A Survey of Numismatic Research, 1966–1971*, 2 (New York, 1973), pp. 305–6.

A preliminary version of this paper was presented at the Twelfth Conference on Medieval Studies at Western Michigan University, Kalamazoo, on 8 May 1977. I am grateful in the first place to Arnold Spaer, John Slocum, and Ariel Berman for volunteering specimens from their collections, and then to Irene F. Preston for an exchange of manuscript material. *Coinage of the Crusader States* by Irene F. Preston and A. J. Seltman, with contributions by D. M. Metcalf, A. A. Gordus, and Michael L. Bates (New York; in press [September 1977]) includes a summary of this paper; from that book I have in turn summarized A. A. Gordus's metallic analysis of the Maraş fragments.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

AMALRICVS REX, and on the other DE IERVSALEM.[2] Taking into account the 10 new fragments, Miles had difficulty in accepting Bagatti's reading. In conclusion he wrote:

> Quite obviously we are dealing with an unknown type of Crusader coin, but who issued the type and where are questions that cannot be answered with any confidence until more such cuttings or intact coins are found. If we are in fact dealing with an Amalric, King of Jerusalem, the only possible candidate is Amalric, son of Fulk, 1163–1174. The letter forms are not unlikely for the period, but such an early date for an experimental gold Crusader coinage with Latin legends would be really extraordinary.[3]

The "really extraordinary" thing about an attribution to Amalric is that while we have hundreds of examples of gold coins struck by the Crusaders during the twelfth century with Islamic types and inscriptions—these are the imitation dinars such as were found at ʿAmwās and Maraṣ[4]—we have no numismatic or literary evidence that the Crusaders struck gold with Latin inscriptions before the arrival of St. Louis at Acre in 1250. In other words, an attribution to Amalric is about a century ahead of the other evidence. Intriguing as the problem might be, further resolution had to await the discovery of more than the 17 bits known in 1967.

Then in 1974 Arnold Spaer of Jerusalem sent this author photographs of 7 bits found a little to the north of the ancient and mediaeval site of Caesarea, which is on the seacoast about halfway between Haifa and Tel Aviv. Spaer wondered if we had heard of any more. When I asked around, John Slocum answered that he had purchased 226 in Beirut in 1974 and 7 more in London later that year. Then, in 1976, Ariel Berman of Ascalon reported 15 more from the same find as Spaer's and another found separately to the southwest of Caesarea.

[2] B. Bagatti, *I Monumenti di Emmaus el-Quebeibeh e dei intorni.* Pubblicazioni dello Studium Biblicum Franciscanum no. 5 (Jerusalem, 1946); "Le monete," pp. 157–77, remarks on Amalric, p. 158.

[3] Miles (above, n. 1), p. 197.

[4] P. Balog and J. Yvon, "Monnaies à légendes arabes de l'Orient Latin," *RN* 1958, pp. 133–68.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The fragments in Mr. Slocum's collection are heterogeneous, and one has no way of estimating the degree to which they combine a dealer's scrap with coherent hoard material. Among them are two non-numismatic items: a tiny engraved horseman and an even smaller crucifix. Of the coin fragments, the earliest datable is from the reign of Justinian. Also of European origin are two bits of a type introduced by Roger II of Sicily (1130–54). Possibly of western origin, but doubtfully numismatic, are two relatively large bits with a cross moline on each side. Of the remaining 225 Slocum pieces, 61 can be positively identified with the types which Miles published, while the rest are either Islamic (predominantly Faṭimid) or completely uncertain.

The 84 new pieces from three collections are published in catalogue form at the end of this essay, together with the 17 published earlier by Miles. From this total of 101 pieces I now propose the attribution to Amalric and one of the Baldwins, kings of Jerusalem in the twelfth century.

In physical description the bits range from a low weight of 0.03 grams to a high of 1.08 grams. From Table 1, a metrological tabulation, it appears that almost a quarter (23/101) are in the range of 0.11–0.20 grams. The thickness runs from about 1 mm to about 2 mm. At a guess the largest fragment is no more than 20 per cent of the whole, which is estimated at approximately the diameter of the imitation dinars, or 22 mm.

TABLE 1

Weights of 101 Gold Fragments

Intervals (*g*)	*Total*	*Intervals* (*g*)	*Total*
0.01–.05	2	0.56–.60	5
0.06–.10	8	0.61–.65	3
0.11–.15	11	0.66–.70	5
0.16–.20	12	0.71–.75	3
0.21–.25	7	0.76–.80	1
0.26–.30	13	0.81–.85	1
0.31–.35	7	0.86–.90	1
0.36–.40	6	0.91–.95	2
0.41–.45	6	0.96–1.00	0
0.46–.50	4	1.01–1.05	0
0.51–.55	3	1.06–1.10	1

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

As Miles found in the 17 pieces he studied, there is considerable variety in color, wear and encrustation, and this has been noted in the catalogue. Surface pitting can be taken in some cases as deterioration in the coin through gradual corrosion or recent cleaning in acid. In other cases it can be understood as deterioration in the die. Indeed, the only suggestion of a die link (between the reverses of nos. 39 and 68) is based on the uniform pattern but progressive degree of pitting. It is fully possible, nevertheless, that some amount of pitting is to be expected even in a pristine die provided we allow for Paul Balog's hypothesis, formulated for another series, that the dies might have been cast.[5] Apart from pitting, there are unambiguous signs of wear on many of the bits. Some from Beirut, on the other hand, are unmistakably fresh.

On the whole the color is a medium gold, but there are a few examples of reddish patination, and even more of a notably pale color. The gold content of the 10 Maraş pieces will soon be published in full by A. A. Gordus, and is related to the color. For the first seven, for example, which Miles described as "pale," Gordus has found a gold content of between 50 and 58 per cent; while for the last three called "bright" or "brighter" the gold content ranges from 58 to 62 per cent. Without Gordus's equipment, however, it is difficult to form more than a visual estimate of fineness, since testing by specific gravity is contraindicated first by the small size and proportionately great surface tension and contamination of the pieces, and second by the considerable variation in the ternary alloy which Gordus has observed.

As far as the center types can be interpreted with any confidence, there are certainly three and possibly four. The first is a six-pointed star executed in broad, straight bands, with additional bands at the periphery and spots in the external angles. The second is the gridiron or matrix of nine cells, framed in a polylobe. Both types were sketched by Miles[6] and are especially clear in nos. 29, 33, 57, and 87 ff. of the catalogue. The usual combination is of a star on one side and a matrix on the other. Less frequently (e.g. nos. 26, 36, 50, 63, 64, and possibly 82) the matrix appears on both sides. The combination of star and star has

[5] P. Balog, "Notes on Ancient and Mediaeval Minting Techniques. 1. The Manufacture of Dies," *NC* 1955, pp. 195–99.

[6] Miles (above, n. 1), p. 195.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

not been found. Ariel Berman's collection has produced a new type which, though incomplete, is neither the star nor the matrix (no. 65).

Then, while the star can be confidently recognized from the straight lines and regular angles 60° and 120° even in very small fragments, one cannot have the same confidence that a small fragment with a polylobe necessarily represents the matrix of lines intersecting at right angles. Indeed from fragmentary lines intersecting at acute angles and terminating in hooks inside the polylobe I suspect that a figure comparable to a boss of fishhooks might eventually be discovered in better examples. For want of a full representation and a better word I have termed this figure an "aster." In this lot the fullest example appears in no. 74.

After this variety in types one can remark a variety in borders. A plain border appears on both sides of most specimens, but in two cases (nos. 63 and 72) the plain border of one side appears with a beaded border on the other. A beaded border alone, on one or both sides, is found in 11 specimens (nos. 19, 20, 24, 26, 27, 42, 50, 54, 60, 64, and 74), of which no. 64 comes from Caesarea and the rest from Beirut.

Because of the fragmentary condition of the coins, observations on epigraphy are necessarily superficial. First there is a fine and simple style of lettering (e.g. in nos. 2, 12, and 22) typically combined with a simple punctuation between words. In the catalogue this has been coded as style 1. Then there are a number of elaborations which have been grouped as style 2. In this group one can remark a bold and heavy style (e.g. no. 44), and some decorated styles (e.g. nos. 3, 4, 41, and 48), and the occasional use of an uncial rather than a square letter (e.g. D in no. 42, E in no. 56). Typically the more elaborate letters are matched by more elaborate punctuation not only between words but within words. Finally one can remark the occasional appearance of a cross in the inscription (nos. 12, 18, 23, 27, 48, 60, 71, and 72).

The inscriptions are the most valuable aspect of the series, and the catalogue has been arranged primarily in terms of the letters. In my supposition, the letters of nos. 1–41 can be reduced to one kind of inscription issued by two kings. The common reverse would be HIERVSALEM (or abbreviated as HIERLM) CIVITAS, and the obverse BALDVINVS or AMALRICVS. What I take for the obverses of nos. 1–8 indicate Baldwin and exclude Amalric; while 9–14 indicate Amalric and exclude Baldwin. In the first group, interestingly, are coins with a provenance

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

of Caesarea, Beirut, and Maraş; in the second, ʿAmwās, Beirut, and London. Accordingly I support Bagatti's original interpretation of the ʿAmwās obverse, while recognizing that Miles could not confirm it from the Maraş pieces partly because in one of the most significant of those pieces (no. 4) the inscription BA points to Baldwin, though the possibility was not noted by Miles. Against Bagatti, however, I hold for a reverse inscription of CIVITAS HIERVSALEM.

Numbers 15–41 are ambiguous in varying degrees. In nos. 15–21 the reverse seems secure, but the obverse letters could derive from either Baldwin or Amalric. In nos. 22–41 there is a double ambiguity, since the letters on both sides are equally good for Baldwin, Amalric, or Jerusalem.

Numbers 42–61 introduce new letters which permit a small increase in the titulature, as DE, DEI GRATIA, REX DE, or REGIS. In nos. 42–53 one can allow for a new word in the obverse without expanding the reverse inscription beyond what was originally proposed. In nos. 54–61 one must allow for the possibility of E on either side, as in REX or DE HIERVSALEM (as proposed by Bagatti, though not for these same pieces).

There remain only six difficult cases (nos. 62–67) that cannot be fitted into the restricted group of inscriptions already proposed. What I have called the reverses of nos. 63–65, and probably nos. 66 and 67 as well, suggest the basic HIERVSALEM CIVITAS; the problem here lies in the obverses. For nos. 65 and 66 the solution SIGNVM . . . I REGIS lies outside this body of coins and will be discussed at the end of the paper. In no. 67 one can suppose without difficulty a personal name in the genitive case, followed by DE or DEI as was allowed for in nos. 42–61. The real difficulties come in nos. 62–64. In the first example the difficulty is in the combination rather than the separate sides. If CV is understood as the obverse, AMALRICVS is allowed and BALDVINVS excluded; but X in the reverse is inexplicable. Conversely if X is taken as an obverse REX, CV cannot be squared with the expected CIVITAS HIERVSALEM Clearly we are dealing with a new combination. The possibility of a muling of two obverses is not to be ruled out merely because it is remarkably convenient. In nos. 63 and 64, on the other hand, the reverse is secure and the problem lies in the obverse letters. For no. 63 I cannot suggest anything. For no. 64 I suggest COMES, though entirely without confidence and in the face of the powerful evidence that this is an exclu-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

sively regal series. The remaining nos. 68–101 have minimal inscriptions at best and are accordingly insusceptible to interpretation here.

The coinage is in such a shambles that there would seem no point at all in publishing it, were it not that from the individual sequences of two or three letters one can confidently build up a very limited and straightforward set of inscriptions for 64 out of 67 examples. But beyond the description of the coinage there are two questions of importance not only in numismatics narrowly defined but in the entire world of Crusader history. Who made this? Who broke it?

Of the makers, Amalric can only be Amalric I (1163–74).[7] Baldwin, on the other hand, could be any of the five of that name who ruled Jerusalem from the establishment of the kingdom in 1100 until its capture by Saladin in 1187. Some special numismatic considerations narrow the range of choice. In the first place, since the two names appear on virtually identical types; and since in addition they are found together both in the small hoard of ʿAmwās first published in 1947 and then in the large parcel obtained by John Slocum in 1974, there is a reasonable inference that Baldwin and Amalric were near contemporaries. In other words, the probable identity of Baldwin is narrowed to Baldwin III, who preceded Amalric, and Baldwin IV, who followed him.

Additional numismatic considerations of the same tendency come from the voluminous silver or billon coinage that has a great deal in common with the gold bits. The silver has Latin legends, with plain or ornamented letters, and is named for both Baldwin and Amalric. From hoard evidence Jacques Yvon has set the death of Baldwin III as the terminus ante quem for the Baldwin pieces.[8] In Yvon's argument, Baldwin III is the most probable originator, but Baldwin I and Baldwin II are still possible. But if in the gold regal series there is indeed a similar but comital coinage, then one can imagine an irregular extension into the darkening reigns of Baldwin IV and Baldwin V.

What to make of the mutilated condition? In all of numismatics there is no other example of a discrete coinage known only in fragments.

[7] J. Prawer, *Histoire du royaume latin de Jérusalem*, 1 (Paris, 1969), p. 168 on nomenclature of "Amalricus" [I] and "Aimericus" [II]; also pl. 11, pp. 478–79.

[8] J. Yvon, "Monnaies et sceaux de l'Orient Latin," *RN* 1966, pp. 89–107.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Miles adumbrated one line of speculation in studying the 17 pieces from ʿAmwās and Maraş. Unconvinced by an argument for Amalric and unaware of the evidence for Baldwin, he suggested that this was an experimental issue.[9]

A parallel example could be cited in the florin coinage of Edward III of England, which failed within eight months of its issue in 1344; or the crown of the rose of Henry VIII, which failed within two months of issue 1526.[10] Of the first a minimum of 120,000 were struck and seven survive; of the second, an unknown number were struck and two survive. There are no die links. The point of this illustration is that while an experimental issue need not be small, it is typically of short duration and limited types. When it fails it is recalled and melted. Since the Crusader fragments bridge at least two reigns and comprise at least a dozen varieties, I am inclined to consider this a recalled rather than an experimental issue. In these terms it should be considered with the U.S. gold series terminated in 1933 rather than with the truly experimental issues of Edward III and Henry VIII. Nevertheless, if this lot is to be considered as mint scraps there is still a great difficulty in explaining how, though uniformly mutilated, they are scattered as far apart as ʿAmwās from Maraş.

Miles adumbrated a second line of speculation in noting that the weights of the seven ʿAmwās fragments were closely grouped around 0.55 grams; though the Maraş fragments varied. Is it possible, as was true of English pence and still later of Spanish dollars, that coins were cut into regular fractions to provide small change? As far as a peak can be found in Table 1, it is spread over four co-terminous intervals from 0.11 to 0.30 grams. The extreme spread is very wide, and from the entire range of weights one would be rash in arguing that the bits were cut to any standard.

If we are thinking of random defacement, and are not satisfied that the answer lies in the mint, could it be from irregular and spontaneous

[9] Miles (above, n. 1), p. 197.

[10] For Edward III, see J. Evans, "The First Gold Coins of England," *NC* 1900, pp. 218–51, esp. pp. 236–39; for Henry VIII, see L. A. Lawrence, "A Remarkable Gold Coin of Henri VIII," *BNJ* 1908, pp. 145–55, and "On a Second Specimen of the Crown of the Rose," *NC* 1921, pp. 102–7.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

activity outside the mint? A deliberately Christian motive is imponderable, and an Islamic motive must be weighed against the survival, intact, of large quantities of Crusader coinage of the twelfth and thirteenth centuries: the Latin silver deniers inscribed with a large cross, the imitation dinars with Islamic legends and types, the later imitations with Christian types and legends in Arabic script, and even four complete examples of the *Agnus dei* type coined by St. Louis.[11]

Altogether I am not impressed by the hypothesis of fanatic defacement. On balance I view this as a substantial and coherent issue, and look for the motive of destruction by Crusader officials in a monetary crisis which has yet to be recognized.

After this paper had been completed a new hoard of similar material came on the market and was eventually purchased by the ANS. It consisted of 40 Latin fragments, 6 Islamic or pseudo-Islamic fragments, 2 imitation dinars, and 2 scraps of jewelry. The Latin fragments are remarkable for naming Baldwin alone, for showing SIGNVM BALDVINI REGIS unambiguously, and for a high incidence of die links. Clearly the new lot is significantly more concentrated and uniform than what has been available so far. For these reasons, and in the interests of time, it has seemed best to publish the miscellaneous 101 here and to publish the newest 40 later.

Abbreviations Used in Catalogue

Collections

AB	Ariel Berman
ANS	American Numismatic Society
AS	Arnold Spaer
CFJ	Convent of the Flagellation, Jerusalem
JJS	John J. Slocum

[11] P. Grierson, "A Rare Crusader Bezant with the *Christus Vincit* Legend," *ANSMN* 6 (1954), pp. 169–78.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Types

1 six-pointed star
2 grid
3 "aster"
4 ambiguous 2 or 3
5 unique (no. 65, rev.)
? partly visible but indeterminate
– missing

Letters

1 light
2 heavy

Stops

1 single point (·)
2 double point (:)
3 triple point (⁝)
4 trigon (∴)
5 annulet (o)

Border

1 solid
2 beaded

Flan Thickness

1 relatively thin (ca. 1 mm)
2 relatively thick (ca. 1.5–2 mm)

Provenance

A ʿAmwās
B Beirut
C1 Caesarea (north)
C2 Caesarea (southwest)
L London
M Maraş

References to A and M are followed by the numbers used by Miles (see n. 1, above) in pl. 43 (which for M are two digits ahead of the catalogue numbers, p. 196).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

No.	*Coll.*	*Wt.*	*Obv. Type*	*Obv. Inscr.*	*Rev. Type*	*Rev. Inscr.*	*Letter Style*	*Stops*	*Border*	*Flan*	*Prov.*	*Notes*
				A. Proposed *obv.*: BALDVINVS; *rev.*: HIERVSALEM CIVITAS								
1	AB	0.56	1	.B.A.	2	.S.I.	2	5	1	1	C1	pale
2	JJS	0.37	–	.BA	–	IVIT	1	2	1	1	B	
3	JJS	0.41	1	B.A	2	H.	2	5,3	1	1	B	
4	ANS	0.46	1	B.A.	2	L.E.M	2	5	1	1	M 12	red
5	AB	0.69	2	BAL	1	S.H	1	4	–	1	C1	pale, pitted
6	JJS	0.27	–	ALD	–	.HI	1	2	1	1	B	pitted
7	AS	0.16	–	IN	–	V	2	–	1	1	C1	
8	ANS	0.44	1	IV	4	TA	2	–	1	1	M 10	red, pitted, worn
				B. Proposed *obv.*: AMALRICVS; *rev.*: HIERVSALEM CIVITAS								
9	CFJ	0.69	1	X.A	2	.E.R	2	1	1	?	A 15	
10	CFJ	0.64	1	.A.M	2	E.R	2	5,1	1	?	A 19	
11	CFJ	0.52	1	A.M	2	S.L.I	2	1	1	?	A 14	
12	JJS	0.32	2	I+	1	.H	1	2	1	1	B	pitted, crusted
13	JJS	0.74	1	C.	2	IR	2	1	1	2	L	pitted, worn
14	CFJ	0.57	1	C.V	2	E.R	2	1	1	?	A 13	
				C. Ambiguous *obv.*: (BALDVINVS or AMALRICVS); proposed *rev.*: HIERVSALEM CIVITAS								
15	AB	0.40	1	AL	2	IER	1	–	1	1	C1	pale
16	CFJ	0.54	2	S.	1	.S.L	?	1	1	?	A 17	
17	AB	0.60	1	–	2	E.M	?	5	1	2	Cl	pale, pitted, worn
18	AB	0.23	2	+S	1	CIV	1	–	1	1	C2	pale, pitted

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

No.	*Coll.*	*Wt.*	*Obv. Type*	*Obv. Inscr.*	*Rev. Type*	*Rev. Inscr.*	*Letter Style*	*Stops*	*Border*	*Flan*	*Prov.*	*Notes*
19	JJS	0.27	2	M (?) N (?)	4	TI	1	–	2	1	B	fresh
20	JJS	0.11	–	I	–	TA	1	–	2	1	B	fresh
21	AS	0.35	2	– ?	1	.I.V	?	5	1	1	C1	
				D. Ambiguous *obv.* and *rev.* (BALDVINVS, AMALRICVS, or HIERVSALEM).								
22	JJS	0.26	1	M	2	AL	1	–	1	1	B	
23	JJS	0.16	1	I +	–	IV	1	–	1	1	B	
24	JJS	0.10	–	O or ·	–	I	2	5?	2	1	B	
25	JJS	0.10	–	.	–	.I	1	5	1	1	B	
26	JJS	0.26	2	.A	2	N	1	1	2	1	B	fresh
27	JJS	0.25	4	V	4	S +	2	–	2	1	B	fresh
28	JJS	0.28	–	.L	–	II.	2	5	1	1	B	
29	JJS	0.44	1	?	2	E	1	–	1	1	B	fresh
30	JJS	0.27	1	.V	2	L.	1	5	1	1	B	fresh
31	JJS	0.41	1	V	2	AI	1	–	1	1	B	fresh
32	JJS	0.15	1?	A(?) X(?).	–	.A(?) X(?)	2	5	1	1	B	fresh
33	JJS	0.43	1	E	2	I	1	–	–	1	B	pitted
34	JJS	0.69	2?	A	–	R.	2	1	1	2	B	pitted, worn
35	JJS	0.08	–	V	–	L.	2	5	1	1	B	fresh
36	AB	0.26	2	A	2	–	2	–	1	1	C1	pale
37	CFJ	0.59	1	.A	2	.L.I	2	5	1	?	A 16	
38	ANS	0.51	1	–	2	S	?	–	1	2	M 9	pitted, worn
39	ANS	0.77	1	AI	2	?	2	–	1	2	M 6	pale, pitted, worn
40	ANS	1.07	1	.S	2	I	2	1	1	2	M 4	pale, worn
41	JJS	0.13	–	V	–	CIV	2	–	1	1	B	pitted

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

No.	*Coll.*	*Wt.*	*Obv. Type*	*Obv. Inscr.*	*Rev. Type*	*Rev. Inscr.*	*Letter Style*	*Stops*	*Border*	*Flan*	*Prov.*	*Notes*
				E. Proposed *obv.* as C. above, but allowing new words (DE, DEI, GRATIA, REX,REX DE, REGIS); proposed *rev.*: HIERVSALEM CIVITAS								
42	JJS	0.15	4	D	2	A	–	–	2	1	B	
43	ANS	1.08	1	S.D.	2	II	2	1	1	2	M 3	pale, worn
44	JJS	0.49	1	E.X	2	.A.L	2	5	1	1	B	red
45	JJS	0.10	–	.X	–	E.	2	5	1	1	B	fresh
46	AB	0.35	2	.X	1	LE	2	1	1	1	C1	pale
47	JJS	0.17	–	X	–	.S	1?	5	1?	1	B	pitted
48	JJS	0.30	–	X.+	–	X	2	3	1	1	B	
49	CFJ	0.58	2	.X.D	1	.V.S	2	1	1	?	A 18	
50	JJS	0.35	2	GIS	2	LEI	1	–	2	1	B	pitted
51	JJS	0.12	–	GIS	–	S.	1	1	1	1	B	fresh
52	JJS	0.39	–	G(?) S(?).	–	.	1	2,1	1	2	B	pitted
53	JJS	0.12	2	G	1	L	1	–	1	1	B	pitted
				F. Ambiguous *obv.* and *rev.* (AMALRICVS, BALDVINVS, or HIERVSALEM), allowing for new letter (E) on either side.								
54	JJS	0.26	3?	A	2	R	2	–	2	1	B	
55	JJS	0.14	–	I	–	R	2	–	1	1	B	pitted, crusted
56	JJS	0.12	–	S.	–	E	2	4	1	1	B	pitted
57	AB	0.17	–	E.	2	.I.	1	1	1	1	C1	pale
58	AB	0.28	1	L.	2	E	2	5	1	2	C1	pale
59	JJS	0.05	–	.I	–	E	?	5	1	1	B	fresh
60	JJS	0.19	–	E	4	+	?	-	2	1	B	pitted
61	AS	0.41	1	.A.	2	I.E	2	1,5	1	1	C1	

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

No.	*Coll.*	*Wt.*	*Obv. Type*	*Obv. Inscr.*	*Rev. Type*	*Rev. Inscr.*	*Letter Style*	*Stops*	*Border*	*Flan*	*Prov.*	*Notes*
				G. Ambiguous *obv.* and *rev.*, with letters not allowed for above.								
62	ANS	0.63	1	C.V	2	X	2	5	1	1	M 8	pitted, red
63	AS	0.70	2	SAS	2	RVS	1	–	1,2	1	C1	
64	AS	0.43	2	COM	2	MCI	1	–	2	1	C1	
65	AB	0.48	2?	NVM	5	EMCI	2	–	1	1	C1	pitted, pale
66	JJS	0.14	4	SIG	1	A	2	–	1	1	B	crusted
67	JSS	0.32	4	I.D	1	S.R.	2	5	1	1	B	fresh
				H. Minimal inscriptions								
68	ANS	0.65	1	II	2	?	?	–	1	2	M 7	pitted, worn, pale
69	JJS	0.16	1	I	4	I.I	?	2	1	1	B	crusted
70	JJS	0.22	–	–	4	I	?	–	1,2	1	B	
71	JJS	0.03	–	+.	?	?	?	5	–	1	B	
72	JJS	0.15	–	+I	–	?	?	–	–	1	B	
73	JJS	0.16	–	O.I	–	V	2	1	1	1	B	
74	JJS	0.29	3?	I (?)	3?	.	2	5	2	1	B	pitted
75	JJS	0.20	4	I.	4	.(?)	?	1	1	1	B	
76	JJS	0.10	–	I.	–	I	2	5	1	1	B	
77	JJS	0.10	–	+	–	I	?	–	1	1	L	pitted
				I. Types without inscriptions								
78	JJS	0.12	1	–	2	–	–	–	1	1	B	
79	ANS	0.91	1	–	2	–	–	–	1	2	M 5	pale

Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

No.	*Coll.*	*Wt.*	*Obv. Type*	*Obv. Inscr.*	*Rev. Type*	*Rev. Inscr.*	*Letter Style*	*Stops*	*Border*	*Flan*	*Prov.*	*Notes*
80	ANS	0.34	1	–	2	–	–	–	1	2	M 11	red
81	AB	0.49	1	–	2	–	–	–	1	1	C1	pale
82	AB	0.29	2?	–	2?	–	–	–	1	1	C1	pale
83	AB	0.71	1?	–	2	–	–	–	1	2	C1	pale, pitted
84	AB	0.84	1	–	2	–	–	–	1	2	C1	pale
85	AB	0.37	1	–	2	–	–	–	1	1	C1	pale, worn
86	AB	0.68	1	–	?	–	–	–	1	2	C1	pale, worn
87	JJS	0.18	1	–	2	–	–	–	1	1	B	
88	JJS	0.12	1	–	2	–	–	–	–	1	B	
89	JJS	0.16	1	–	2	–	–	–	1	1	B	
90	JJS	0.20	1	–	2	–	–	–	1	1	B	
91	JJS	0.10	1	–	?	–	–	–	–	1	B	
92	JJS	0.87	1	–	2	–	–	–	1	1	B	
93	JJS	0.72	1	?	2	–	–	–	1	2	B	
94	JJS	0.39	1	–	2	–	–	–	1	2	B	
95	JJS	0.17	1	–	4	–	–	–	1	1	B	
96	JJS	0.28	1	–	2	–	–	–	–	1	B	
97	JJS	0.09	–	–	–	–	–	–	1	1	B	pitted
98	JJS	0.23	1	–	2	–	–	–	–	1	B	
99	JJS	0.25	1	–	2	–	–	–	1	2	L	pale
100	AS	0.91	1	–	2	–	–	–	1	2	C1	pale
101	AS	0.31	1	–	3	–	–	–	1	1	C1	

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

A HOARD OF BILINGUAL TRAMS OF HETOUM I OF CILICIAN ARMENIA

(PLATES 32–35)

PAUL Z. BEDOUKIAN

The *Coinage of Cilician Armenia*,[1] published in 1962, listed about 200 bilingual coins known to exist in major museums and private collections. Recently, the author obtained aluminum foil impressions of over 300 bilingual coins[2] which constitute a major addition to the previously available material, and as such, merit study. Examination of the hoard disclosed a number of hitherto unpublished varieties and made possible the correction of some errors which had appeared in the literature.

The bilingual coins of Hetoum I (1226–71) consist of two series: those struck with the reverse bearing the name of the Seljuk sultan of Konya, namely Kaiḳobād I (A.D. 1219–36/A.H. 616–34), and those of his successor, Kaikhusrew III (1237–45/636–44). None of the coins of Hetoum Kaiḳobād bears a date on the Islamic side. A few coins of Hetoum-Kaikhusrew also have no date, and on these, the epigraphy of the Armenian legend is markedly similar to that on the coins of Hetoum-Kaiḳobād. It may reasonably be assumed that these were the initial issues of Hetoum-Kaikhusrew, struck before 639 A.H.

On all the Hetoum-Kaiḳobād pieces, the Armenian word for king, Takavor, is written as ԹԱԳԱՒՈՐ. This spelling appears on all the undated coins of Hetoum-Kaikhusrew, and on a few dated ones which clearly read 639. The multitude of Hetoum-Kaikhusrew coins showing dates from 639–44 without exception spell Takavor as ԹԱԳԱՒՈՐ with the last two letters ligatured.

In the author's corpus, a number of coins were assigned to the year 637. This was an error caused by the fact that in Arabic the words representing the numerals seven and nine are so similar that it is often

[1] P. Z. Bedoukian, *Coinage of Cilician Armenia*, *ANSNNM* 147 (New York, 1962).

[2] The author wishes to thank J. Guevrekian of New York for the aluminum foil impressions of the entire hoard.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

very difficult to distinguish them from each other. A reexamination of the coins listed in the corpus and a critical study of the large number of coins in the hoard bearing the 637 or 639 date have convinced the writer that all were struck in 639. Not one coin can justifiably be given the date 637, and no coins have been found from 638.

Historical events offer an explanation for the sudden appearance of a larger number of coins bearing the 639 date, as well as the notable improvement in the style and quality of coins beginning with that date.

The circumstances leading to the striking of bilingual coins by Hetoum were described by the author some years ago.[3] Relations between the Armenians and the Seljuks had been peaceful for many years. With the coming of the Mongols, the Seljuk sultan felt the need to further strengthen his ties with his neighbors in order to prepare a defense against the Mongol power. Aboul Faraj writes that by invitation, Hetoum's Constable Constantine went to the sultan in Caesarea and "he was received with great honor and he collected many gifts and he promised to go and call together many Armenians and come to the help of the Sultan."[4] Actually, the Armenians did not actively assist the Seljuks in their wars, but they considered it prudent to maintain an outwardly friendly relationship with them by continuing to strike bilingual coins. The year 639 must be considered the first year of the reaffirmation of friendship that developed out of the visit of Constantine to the court of Kaikhusrew.

Subsequent events proved the validity of the sultan's fears. The Seljuks suffered serious defeats in the battles with the Mongols. Sensing the terrible danger to their own existence, the Armenians sought and secured an alliance with the Mongols, thereby incurring the enmity of the Seljuks. Their relationship with the Seljuks was further worsened when Hetoum, as a price of his alliance with the Mongols, was forced to hand over to them the sultan's family, including his mother, daughter and sister who had sought refuge in Armenia. In revenge, Kaikhusrew invaded Cilicia and laid siege to Tarsus in A.D. 1246. With his death shortly thereafter, the Seljuk kingdom ceased to exist and the Seljuks became vassals of the Mongols.

[3] P. Bedoukian, "The Bilingual Coins of Hetoum I (1226-1270) King of Cilician Armenia," ANSMN 7 (1957), pp. 219–30.

[4] E. A. Budge, *The Chronography of Bar Hebraeus* (Oxford, 1932), p. 407.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

It is curious that we have bilingual coins bearing the date 644 when the Seljuks invaded Armenia. In all likelihood, these relatively rare coins were struck in that year before the actual invasion of the Seljuks. The existence of coins bearing the date 644 was not known until the publication of a note by Rhodes.[5] The fact that a number of specimens were found in the hoard bearing that date indicates that the hoard was buried shortly after A.D. 1246.

A study of the Arabic side of the coins supports the idea that beginning with the date 639 special care was taken in the striking of the coinage.[6] Prior to that date, coins of Kaikhusrew show that the die cutters were not very familiar with Arabic and were copying the legends of Seljuk coins as best they could, but not with accuracy. Here and there on certain specimens, one can almost see an effort to represent a date, but it it is never clear. Starting with 639, all dates are very clear and it would appear that the die cutters had become familiar with the Arabic language and coinage.

A summary of the contents of the hoard as compared with the specimens listed in *Coinage* of *Cilician Armenia* may be of interest.

Coins	*Date*	*Corpus Number*	*Specimens in Corpus*	*Specimens in Hoard*	*Unpublished Types*
Hetoum-	No date	776–80	68	38	—
Kaiḳobād	No date	781–84	6	7	2
Hetoum-	No date	785–91	20	32	3
Kaikhusrew					
	639 (Transition)	—	—	2	1
	639	—	55	105	5
	640	814–16a	23	30	3
	641	817–23	15	34	3
	642	824–27	9	22	2
	643	828	3	9	3
	644	—	—	20	6

[5] N. G. Rhodes, "Some Armenian Notes," *NCirc* (Oct., 1976), p. 371.

[6] I am grateful to Michael Bates of the American Numismatic Society for examining the Islamic side of the coins and making appropriate comments.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The cataloguing of the coins in this article and in the corpus is based on the obverse varieties. The Islamic side of the coins in the hoard presents many more die types. For example, in the case of Hetoum-Kaiḳobād, we have nine obverse and fourteen reverse dies in 45 coins. Among the Hetoum-Kaikhusrew coins, there are 93 obverses and 169 reverses in a total of 254 coins. This accounts for a total of 299 specimens. About 18 coins could not be deciphered. The information reaching the author was that in all probability the original hoard consisted of about 380 coins.

The Kaikhusrew issues can be identified by noting the design above the letter "sin." Apparently, a deliberate attempt was made to indicate the varieties by this method, possibly as a means of accounting.

Illustrated specimens are marked by an asterisk (*).

NNM 147 Corpus No.	Obv. Die	Rev. Die	Obverse Field Mark	Specimens	Rev. Link to Obv. Dies
			HETOUM-KAIḲOBĀD		
			ՀԵԹՈՒՄ ԹԱԳԱՒՈՐ ՀԱՑՈՑ		
776	1			1–10	
		2	”	11, 12	
		3	”	13	
776	2	4	”	14–25*	
776	3	5	”	26–30	6
		6	”	31	
781		7	”	32	
		8	”	33	
781	4	9	”	34	
776	5	10	”	35	
777	6	5		36–40	3
782	7	11	”	41*	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

NNM 147 Corpus No.	Obv. Die	Rev. Die	Obverse Field Mark	Specimens	Rev. Link to Obv. Die
		Obverse ԹԱԳԱՈՒՐ instead of ԹԱԳԱՒՈՐ			
Unpubl.	8	5		42	3
		12	”	43	
		13	”	44*	
Unpubl.	9	14		45*	
		HETOUM-KAIKHUSREW [WITHOUT DATE]			
		ՀԵԹՈՒՄ ԹԱԳԱՒՈՐ ՀԱՑՈՑ			
791	10	15		46–49*	
		16	”	50	
		17	”	51	
	11	18	”	52	
	12	19	”	53	
786	13	20		54–56	
		21	”	57–59	
		22	”	60	
	14	23	”	61*	
	15	24	”	62	
788	16	25		63–65	
		26	”	66*, 67	
		27	”	68	
Unpubl.	17	28		69*	
789	18	29		70*, 71	
785	19	30		72	
		31	”	73*	
	20	32	”	74	
Unpubl.	21	33		75*	
		34	”	76	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

NNM 147 *Corpus No.*	*Obv. Die*	*Rev. Die*	*Obverse Field Mark*	*Specimens*	*Rev. Link to Obv. Dies*
			ՀԵԹՈՒՄ ԹԱԳԱՒՈՐ ՀԱՑՈ		
Unpubl.	22	35		77*	
			DATED 639 A.H. [TRANSITION]		
			ՀԵԹՈՒՄ ԹԱԳԱՒՈՐ ՀԱՑՈՑ		
Unpubl.	23	36		78*	
		37	”	79	
			YEAR 639 A.H.		
			ՀԵԹՈՒՄ ԹԱԳԱՒՐ ՀԱՑՈՑ		
798 or 803	24	38		80–82	
	25	39	”	83, 84	28
		40	”	85, 86*	
	26	41	”	87	
		42	”	88	
	27	43	”	89	
	28	40	”	90	25
802 or 813	29	44		91–93*	
795 or 807	30	45		94–96	
	31	46	”	97	
		47	”	98	
		48	”	99	
	32	49	”	100, 103	
		50	”	101	
		51	”	102	
		46	”	104	31
		52	”	105	
		53	”	106	
		54	”	107	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

NNM 147 *Corpus No.*	*Obv. Die*	*Rev. Die*	*Obverse Field Mark*	*Specimens*	*Rev. Link to Obv. Dies*
	33	55	"	108	
		54	"	109, 110*, 115	
		57	"	111	
		58	"	112	
		59	"	113	
		60	"	114	
	34	61	"	116	
	35	48	"	117	31
	36	62	"	118	
		63	"	119	
		64	"	120	
		65	"	121	
		66	"	122	
	37	67	"	123, 124	
		68	"	125	
		69	"	126–30	
		62	"	131	36
		70	"	132	
		71	"	133	
	38	72	"	134, 135	
		73	"	136	
		74	"	137	
		75	"	138	
		67	"	139	37
	39	76	"	140	
	40	77	"	141	
	41	78	"	142	
	42	79	"	143	
	43	80	"	144	
801 or 813	44	81		145, 146	
Unpubl.	45	82		147	
		83	"	148, 149	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

NNN 147 Corpus No.	Obv. Die	Rev. Die	Obverse Field Mark	Specimens	Rev. Link to Obv. Die
		84	"	150	
		85	"	151	
		86	"	152*	
	46	87	"	153	
Unpubl.	47	88		154	
		89	"	155–57	
	48	90	"	158*, 159	
		89	"	160	47
	49	91	"	161	
		92	"	162	
		93	"	163	
	50	94	"	164	
800	51	95		165*	
	52	96	"	166	
	53	97	"	167, 168	
	54	98	"	169, 170	
Unpubl.	55	99		171–73	
,		100	"	174–78*	
		101	"	179	
804	56	102		180*, 181	
Unpubl.	57	103		182*, 183	
Unpubl.	58	104		184*	
		YEAR 640 A.H.			
Unpubl.	59	105		185*	
		106	"	186	
		107	"	187	
		108	"	188	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

NNM 147 *Corpus No.*	*Obv. Die*	*Rev. Die*	*Obverse Field Mark*	*Specimens*	*Rev. Link to Obv. Dies*
815	60	109		189–93	
		110	"	194	
		111	"	195	
	61	112	"	196–98	
		113	"	199*	
	62	114	"	200	
	63	115	"	201	
	64	116	"	202	
Unpubl.	65	116		203	64
		117	"	204*	
		118	"	205	
		119	"	206, 207	
		120	"	208	
		105	"	209	59
814	66	121		210	
		122	"	211*	
	67	123	"	212	
Unpubl.	68	124		213	
	69	125	"	214*	

YEAR 641 A.H.

818	70	126		215	
		127	"	216	
		128	"	217	
	71	129	"	218*	
		130	"	219	
		131	"	220	
Unpubl.	72	132		221–23	
		133	"	224*, 225	
		134	"	226	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

NNM 147 Corpus No.	Obv. Die	Rev. Die	Obverse Field Mark	Specimens	Rev. Link to Obv. Dies
820	73	135		227, 228	
		136	"	229*	
		137	"	230	
		138	"	231	
	74	139	"	232–35	
		140	"	236	
		141	"	237	
Unpubl.	75	142		238, 239	
		143	"	240, 241*	
		144	"	242	
Unpubl.	76	145		243, 244	
		146	"	245*	
		147	"	246	
		148	"	247	
822	77	149		248*	
			YEAR 642 A. H.		
826	78	150		249, 250	
		151	"	251	
	79	152	"	252	
		153	"	253	
		150	"	254	78
	80	153	"	255	79
		154	"	256*	
	81	155	"	257	
	82	156	"	258	
	83	157	"	259	
	84	158	"	260	
	85	159	"	261	
		160	"	262	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

NNM 147 Corpus No.	Obv. Die	Rev. Die	Obverse Field Mark	Specimens	Rev. Link to Obv. Dies
Unpubl.	86	158		263	84
		153	"	264	79
		161	"	265, 266	
		162	"	267*	
Unpubl.	87	163		268	
		164	"	269	
		165	"	270*	
			YEAR 643 A.H.		
Unpubl.	88	166		271*, 272	
Unpubl.	89	167		273*	
		168	"	274	
828	90	166		275, 276	
			"	277	88
	91	169	"	278*	
Unpubl.	92	170		279*	
			YEAR 644 A.H.		
Rhodes	93	171		280	
		172	"	281	
	94	173	"	282	
	95	174	"	283*	94
	96	174	"	284	
		172	"	285	93
		172	"	286	
Unpubl.	97	172		287–89*	93
		175	"	290	
		176	"	291	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

NNM 147 *Corpus No.*	*Obv Die*	*Rev. Die*	*Obverse Field Mark*	*Specimens*	*Rev. Link to Obv. Dies*
Unpubl.	98	177		292*	
Unpubl.	99	172		293*	93
Unpubl.	100	178		294*	
Unpubl.	101	179		295*	
		180	"	296	
		181	"	297	
		182	"	298	
Unpubl.	102	183		299*	
			UNCERTAIN DATES		
	Mostly 64 X			300–17	
			HALF TRAMS (No Date)		
840	103	183		318	
Unpubl.	104	184		319	

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

THE COINAGE OF THE REVOLUTIONARIES IN THE LATE UMAYYAD PERIOD

(PLATES 36–37)

CARL WURTZEL

Throughout the years of the Umayyad dynasty, dissatisfaction with the policies of the Umayyad rulers came to characterize many sectors of the empire. The intensity of this dissatisfaction, and concomitant agitation for the overthrow of the government, increased dramatically in the last years of Umayyad rule, culminating in the so-called ʿAbbāsid Revolution which effected the overthrow of the Umayyad house, and inaugurated the ʿAbbāsid dynasty.

While it was a member of the ʿAbbāsid family who was installed as caliph in 132 H./A.D. 749, establishing the new dynasty, the revolutionary movements during the reign of the last Umayyad caliph, Marwān II, represented several different groups with differing ideologies and purposes. Before the ʿAbbāsids and their partisans took the military and political initiative, they were preceded by the temporarily successful independent insurrections of ʿAbd Allāh b. Muʿāwiya, various Khārijī rebels, and several political factions in Khurāsān.

The coinage issued by the revolutionaries during the final years of the Umayyad period has captured the attention of a number of researchers who made one or more of the coins the object of special study.[1]

[1] See List of Abbreviations for this article on pp. 198-199.

For a discussion of this coinage see: G. Van Vloten, "Über einige bis jetzt nicht erkannte Münzen aus der letzten Omeijadenzeit," *ZDMG* 46 (1892), pp. 441–44; Zambaur, *NZ*, pp. 45–47; R. Guest, "A Coin of Abū Muslim," *JRAS* (1932), pp. 555-56; Miles, *NHR*, pp. 15–21; al-Bakrī (1968), pp. 119–25; al-Ḥusaynī, pp. 32–35; ʿA. ʿA. Ḥamīd, "A Unique Silver Dirham of Abū ʿAlī al-Kirmānī," [in Arabic], *al-Maskūkāt*, 4 (1973), pp. 26–28; P. Jaeckel, "Eine Rebellenmünze aus der abbasidischen Revolutionszeit," *Jahrbuch für Numismatik und Geldgeschichte*, 14 (1974), pp. 181–90; Rotter, pp. 191–95.

I wish to thank the following for their generosity in supplying me with photographs or descriptions of coins in the collections of which they are in charge: Ibrahim Artuk,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Most of the coins are readily distinguished from the standard Umayyad designs by their peculiar slogans, and were signalized in many museum catalogues and articles under the overly-generalized headings "Coins of Abū Muslim," "ʿAbbāsid Partisans," "Connecting Link," and the like.

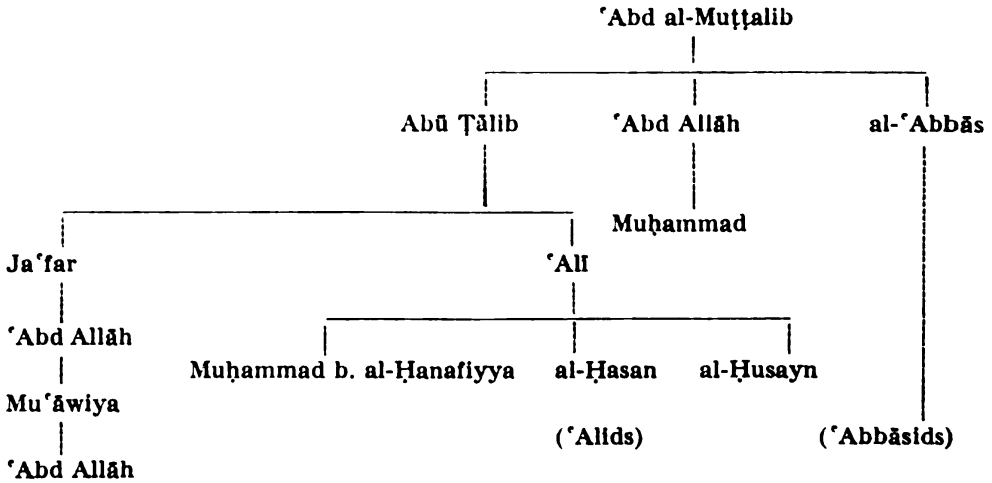
The confusion with respect to the various revolutionary movements of the period—and with respect to their coinage—derived from several sources. The Shīʿī revolutions of both the Ṭālibid ʿAbd Allāh b. Muʿāwiya and the ʿAbbāsids were fought for what was outwardly the same goal, namely the replacement of the Umayyad caliphate with a caliphate-imāmate of the kin of the Prophet (*ahl al-bayt*), in which the caliph was endowed with religious as well as temporal functions. A chief tenet of the Shīʿa was that only a Muslim who had kinship with the Prophet was entitled to the office. The exact nature of the requisite kinship varied with the opportunistic whims of demagogues and the fickleness of the populace.[2] Thus, while "kin of the Prophet" signified for Ibn Muʿāwiya and his followers a descendant of the Prophet's paternal uncle, Abū Ṭālib, for the ʿAbbāsids it meant a descendant of the Prophet's other paternal uncle, al-ʿAbbās.[3] Most confusing, as far as numis-

---

Istanbul Arkeoloji Muzesi; Mahāb Darwīsh al-Bakrī, Iraqi Museum, Baghdad; Raoul Curiel, Bibliothèque Nationale, Paris; Nicholas Lowick, British Museum, London; Nuri Pere, Yapı ve Kredi Bankası, Istanbul; John J. Slocum, Newport R.I. I especially wish to thank Michael L. Bates of the ANS for much helpful advice.

[2] See M. A. Shaban, *The ʿAbbāsid Revolution* (Cambridge, 1970), pp. 138–49.

[3] The following diagram might elucidate some of the family relations:



The mother of al-Ḥasan and al-Ḥusayn was Fāṭima, the daughter of the Prophet.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

matists is concerned, is that Ibn Muʿāwiya used a Qur'ānic slogan on his coinage calling for "love for (the Prophet's) kin," which was later adopted by the ʿAbbāsid partisans for use on their coinage as well, thereby complicating the matter of identification.

The Dutch orientalist, G. Van Vloten, was the first to attempt to assign the coins to the correct revolutionary leader or faction responsible for their issue. He pointed out the inaccuracy of grouping together distinct revolutionary movements having different motivations and objectives, and sharing only the common desire to put Umayyad rule to an end. Van Vloten assigned only some of the then-known "revolutionary" coinage to Abū Muslim, the chief agent and military commander for the ʿAbbāsid movement in Khurāsān. One coin he assigned to Khārijī revolutionaries. The majority of the coins he attributed to ʿAbd Allāh b. Muʿāwiya, who with Shīʿī support revolted in 127/744, and gained control of much of al-Jibāl and Fārs between 127 and 129.[4] Although ʿAbbāsids and ʿAbbāsid partisans—as well as Khārijīs, Umayyads, and ʿAlids—did in certain instances join with Ibn Muʿāwiya in support of his rebellion, his activities were in his own behalf, and not in behalf of the ʿAbbāsids.

Two recent numismatic articles have dealt with the historical factors behind the Shīʿī revolutionary movements. M.D. al-Bakrī (1968) discusses the development of the ʿAbbāsid propaganda campaign, and presents some of the issues of ʿAbd Allāh b. Muʿāwiya and Abū Muslim. However, of the twelve coins discussed by al-Bakrī, only two belong to the pro-ʿAbbāsid partisans, while nine were issued by ʿAbd Allāh b. Muʿāwiya and his lieutenants. In an article dealing primarily with a new specimen of a Khārijī dirham, P. Jaeckel (see above, n. 1) details the

[4] Some writers were either unaware of Van Vloten's article (above, n. 1), or did not carefully follow his arguments. A fals issued by Ibn Muʿāwiya in al-Rayy in 127 (no. 31) is listed by Zambaur, *NZ*, pp. 45–46 under the heading "Partisans Abbasides," and by Miles (*NHR*, p. 15) as "evidence of the success of the ʿAlid-ʿAbbāsid faction at Rayy." Both Miles and Zambaur included a dirham struck by Khārijīs in al-Kūfa in 128 (no. 28) among the issues of Abū Muslim and Ibn Muʿāwiya (Miles, *NHR*, p. 16 ; Zambaur, *Münzprägungen*, s.v. "al-Kūfa," nn. 1 and 9). Miles did recognize and call attention to the Khārijī nature of the slogan on the coin. Sourdel (p. 7) noted Miles's error in subsuming the Khārijī issue with the coins of Abū Muslim and Ibn Muʿāwiya and Miles acknowledged this correction in *Persepolis*, p. 52. Another Khārijī issue, Tanbūk (?), 133 (no. 29), Zambaur ascribed to ʿAbd Allāh b. Muʿāwiya (*Münzprägungen*, s.v. "Tanbūk").

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

origins and historical background of the Khārijī and Shīʿī movements. Jaeckel touches upon the coinage of Ibn Muʿāwiya and Abū Muslim, and restates some of Van Vloten's points, but he offers no new interpretation of the numismatic material.

In the years since the publication of Van Vloten's article several new examples of the "revolutionary" coinage have come to light. New techniques in Islamic numismatic study[5] have made it possible to determine more accurately the affinity of several of the coins. The present paper will show that certain variations in design configurations and annulet patterns in the "revolutionary" dirhams correspond with certain events chronicled in the early histories. An attempt has been made to bring up to date the inventory of the coinage, as well as to present it in its proper historical context.

1. THE DIRHAMS

The dirhams under consideration in the present study are grouped according to features of design and annulet configurations. The obverse field legend and the reverse field and marginal legends are identical to the standard postreform Umayyad dirham type.[6] The dirhams of Ibn Muʿāwiya and Abū Muslim—with the exception of Marw, 131–33 (nos. 25–27)—transferred the legend indicating the year and place of issue from the obverse inner margin of the standard Umayyad type to the obverse outer margin. The words in the outer marginal legend are divided by seven single annulets in the dirhams of Ibn Muʿāwiya, and by four sets of triple annulets in the dirhams of Abū Muslim (see Table 1).

[5] Compare A. S. DeShazo and M. L. Bates, "The Umayyad Governors of al-ʿIraq and the Changing Annulet Patterns on their Dirhams," *NC* 1974, pp. 110–18.

[6] The obverse field reads *lā ilaha illā/Allāh waḥda-hu/lā sharika la-hu*. In the dirhams of Group 1-C, the second line of the obverse field legend reads *Allāh waḥda-hu lā*, and the third line reads *sharika la-hu*. The reverse field legend of all the dirhams reads *Allāh aḥad Allāh/al-ṣamad lam yalid wa/lam yūlad wa-lam yakun/la-hu kufu'an aḥad* (Qur'ān 112:1–4; on the meaning of *al-ṣamad*, see F. Rosenthal, "Some Minor Problems in the Qur-ān," *The Joshua Starr Memorial Volume*, Jewish Social Studies Publication No. 5, [New York, 1953], pp. 72–83).The reverse marginal legend reads *Muḥammad rasūl Allāh arsala-hu bi-'l-hudā wa-dīn al-ḥaqq li-yuẓhira-hu ʿalā 'l-dīn kulli-hi wa-law kariha 'l-mushrikūn* (see Qur'ān 9:33 and 61:9).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

In the dirhams of Ibn Muʿāwiya—excluding Iṣṭakhr, 128 (no. 12)—the customary expression *hādhā 'l-dirham*, "this dirham," was omitted in the obverse outer marginal legend which gives the place and year of issue. The obverse inner marginal legends reads *Qul lā as'alu-kum ʿalay-hi ajran illā 'l-mawaddata fī 'l-qurbā*, "Say: 'I ask of you no recompense for this other than love of kin.'"[7] This inner marginal legend forms a square in the dirhams of Abū Muslim (see Figure 1), and is more or less circular in the dirhams of Ibn Muʿāwiya.



Fig. 1
(Coin of Group 2 — Abū Muslim)

The differences in design, legend, and annulet patterns in the "revolutionary" dirhams correspond to certain events chronicled by the early historians. Whether these differences in design were deliberate, or whether they are simply unintentional variants produced by the different die engravers employed by the different men in power, is not known, and for the present purposes, is irrelevant. The important point is that subtle differences in the features of otherwise similar coins may at least in some cases be systematically interpreted so as to confirm literary sources, and in some cases the evidence might even illuminate events about which the literary sources are silent or confused.

On the basis of annulet and design configurations, the dirhams under consideration may be classified in four groups (see Table 1).

[7] See Qur'ān 42:23.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 1[a]

Classification of Dirhams

Group			*Obverse Inner Marginal Legend*	*Obverse no. of annulets*	*Outer Margin annulet lacking betw.*	*Reverse Annulets*
1. 'Abd Allāh b. Mu'āwiya and his lieutenants (*hādhā 'l-dirham*" lacking [except no. 12]; Qur'ān 42:23).						
1–A.						
	1. Jayy	127	O)	7×O	ومئة بسو	6
	2. Jayy	128	O)	7×O	"	6
	3. Jayy	129	O)	7×O	"	6
	4. al-Taymura	128	O)	7×O	"	6
	5. al-Taymura	129	O)	7×O	"	6
	6. al-Rayy	128	O)	7×O	"	6
	7. Rāmhurmuz	128	O)	7×O	"	6
1–B.						
	8. Hamadhān	129	O)	7×O	"	5
	9. Māhi (Māhay?)	129	O)	7×O	"	5
	10. al-Rayy	129	O)	7×O	"	5
	11. al-Rayy	130	O)	7×O	(see cat.)	5
1–C.						
	12. Iṣṭakhr	128	لا)O)	7×O	(see cat.)	5
	13. Iṣṭakhr	129	لا)O)	7×O	سنة تسع	5

[a] Explanation of symbols in Table 1 :

O = Arranged more or less circularly around the obv. field legend.

□ = Forms a square around the obv. field legend.

) = To right of O: the obv. inner marginal legend is separated from the outer margin by a single serrate circle; to left of O: the obv. inner marginal legend is separated from the field legend by a single serrate circle.

)),))) = Obv. inner marginal legend is separated from the outer margin by double, triple serrate circles.

لا = Last word of the 2nd line of the obv. field legend is *lā* (rather than the first word of the 3rd line, as in the standard postreform Umayyad type).

— = Not applicable.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

14.	Darābjird	129	⟩)O)	7×O	"	5
15.	Sābūr	129	⟩)O)	7×O	"	5
16.	Ardashīr Khurra	129	⟩)O)	7×O	"	?
17.	Jayy	129	⟩)O)	7×O	"	5
18.	Jayy	130	⟩)O)	7×O	see n. 20	?
2. Abū Muslim and his lieutenants (Qur'ān 42:23)						
19.	Balkh	130	□))	4× ⁂	—	5
20.	Balkh	131	□))	4× ⁂	—	?
21.	Balkh	132	□))	4× ⁂	—	?
22.	Marw	130	□))	4× ⁂	—	?
23.	Jurjān	130	□))	4× ⁂	—	5
24.	al-Rayy	131	□))	4× ⁂	—	5
3. Abū Muslim (lacking slogan).						
25.	Marw	131	O)))	8× ⁂	—	5
26.	Marw	132	O)))	8× ⁂	—	5
27.	Marw	133	O)))	8× ⁂	—	5
4–A. Khārijīs (*la ḥukma illā li-llāh*)						
28.	al-Kūfa	128	O))	4×O	—	5
29.	Tanbūk (?)	133	O))	4× ⊙	—	5
4–B. Al-Kirmānī (*mimmā amara bi-hi al-amīr al-Kirmānī b. ʿAlī*).						
30.	Marw	128	O))	4× ⊙	—	5

GROUP 1:

The Dirhams of ʿAbd Allāh b. Muʿāwiya and His Lieutenants

ʿAbd Allāh b. Muʿāwiya, a descendant of the Prophet's paternal uncle Abū Ṭālib, was regarded by many Shīʿīs as a legitimate candidate for the caliphate-imāmate, based on the Shīʿī principle of kinship with the Prophet. Thus when ʿAbd Allāh b. Muʿāwiya revolted—at the instigation of the Shīʿa—and took control of cities, he employed as a slogan on his coinage a Qur'ānic verse which would be interpreted by many as a call for special preference for the kin of the Prophet. The slogan may be translated, "Say: 'I ask of you no recompense for this other than love of kin.'" For Ibn Muʿāwiya and his supporters, "kin" in this Qur'ānic verse was interpreted as "kin of the Prophet," and "love" as

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

"support for the caliphate-imāmate" of the *ahl al-bayt*. The slogan was vague and non-specific enough to appeal to all factions of the Shīʿa, so that supporters of the different branches of the ʿAlids and supporters of the ʿAbbāsids would be drawn to support Ibn Muʿāwiya. Each group would feel comfortable about joining the revolt, imagining that "kin (of the Prophet)" meant, or eventually would be taken to mean, their own preferred candidate.

The revolution of Ibn Muʿāwiya, and the realm that arose with him as its titular head, was a conglomeration of the most diverse political, social, and religious elements, tenuously held together by a common opposition to the Umayyad policies and rule. One gets the impression that Ibn Muʿāwiya was not the real leader of this amorphous, though wide-scale, uprising. The fact is that there was no leader, or rather, there were several semi-independent leaders, some of whom used Ibn Muʿāwiya's claims as a convenient legitimizing factor for their own opposition to the Umayyads. From the outset of his revolution in al-Kūfa in 127/744, Ibn Muʿāwiya's function seems more as a rallying point and figurehead than as a leader. He was at times joined by ʿAlids, ʿAbbāsids, Khārijīs, and disgruntled Umayyads, who had nothing in common but the desire to see the end of the Umayyad dynasty.[8] In the year 129/746–47 the area pledging loyalty to Ibn Muʿāwiya was at its greatest extent, but by the end of 130 there was nothing left, much of his domain having been repossessed by forces loyal to the Umayyads. He and his two brothers fled in defeat and humiliation towards Khurāsān, hoping to get a favorable reception from Abū Muslim, who ultimately ordered him put to death.[9]

[8] See Khalīfa, p. 567f.; al-Ṭabarī, 2, pp. 1879f., 1977; M. A. Shaban, *Islamic History A.D. 600–750* (Cambridge, 1971), pp. 161–63; J. Wellhausen, *The Religio-Political Factions in Early Islam*, ed. and trans. R. Ostle (New York, 1975), pp. 164–65. A statement attributed to ʿAbd Allāh b. al-Zubayr during his revolt in Makka more than half a century earlier might be applicable to the motley coalition behind Ibn Muʿāwiya. Joined by a division of Khārijīs, Ibn al-Zubayr was asked why he would battle in the ranks of such heretics. He replied that he would fight against the Syrians (the Umayyads) "even with the help of the devils (*al-shayāṭīn*)" (al-Balādhurī, *Ansāb al-ashrāf*, 4-B, ed. M. Schloessinger [Jerusalem, 1938], p. 49).

[9] The historians report different traditions on the precise circumstances of his demise. Compare Khalīfa, pp. 586, 591; al-Ṭabarī, 2, pp. 1979f.; Ibn al-Athīr, *al-*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

GROUP 1–A :

Jayy, 127 (no. 1), 128 (no. 2), 129 (no. 3); al-Taymura, 128 (no. 4), 129 (no. 5); al-Rayy, 128 (no. 6); Rāmhurmuz, 128 (no. 7)

ʿAbd Allāh b. Muʿāwiya received the pledge of allegiance in al-Kūfa, where he revolted against the Umayyad governor in al-Muḥarram 127/October-November 744.[10] Ibn Muʿāwiya was expelled by the governor's forces from al-Kūfa, whence he proceeded to Iṣbahān, where he took up residence. He soon gained the allegiance of a wide area. Al-Madā'inī lists the following places over which he gained control: al-Madā'īn, Hulwān, Iṣbahān,[11] al-Māhān,[12] Hamadhān, al-Rayy, and Qūmis.[13] Khūzistān (al-Ahwāz) also fell under his sway.[14] According to accounts by Abū Mikhnaf and al-Madā'inī, a certain Sulaymān b. Ḥabīb[15] was in control of al-Ahwāz in 129/746–47. In that year he was put to rout by troops sent by Yazīd b. ʿUmar b. Hubayra, the new Umayyad governor over al-ʿIrāq.[16] When Sulaymān was ousted from al-Ahwāz, he fled to Fārs and joined up with Ibn Muʿāwiya.[17] Sulay-

---

Kāmil fi 'l-ta'rīkh, 5, ed. C. Tornberg [Beirut, 1965–67], p. 372; Wellhausen (above, n. 8), p. 165.

[10] Abū Mikhnaf: Hishām b. Muḥammad al-Kalbī: al-Ṭabarī, 2, p. 1879.

[11] The name Iṣbahān is not found on postreform dirhams until the ʿAbbāsid period, although it does appear on fulūs during the Umayyad period. Jayy and al-Taymura, neighboring cities near Iṣbahān, had mints which produced postreform Umayyad dirhams (see Zambaur, *Münzprägungen*, pp. 48, 94, and 101).

[12] That is, the two Māh's, Māh al-Baṣra (Nihāwand) and Māh al-Kūfa (Dīnawar) (see Zambaur, *Münzprägungen*, pp. 222, 223 and n. 18, below). The old Persian province of Māda was called by the Arabs Māh (*Münzprägungen*, pp. 222, 223).

[13] al-Ṭabarī, 2, pp. 1880f., 1976.

[14] *Ta'rikh al-khulafā'*, ed. P. Griyaznevitch (Moscow, 1967), p. 294a, l. 1.

[15] According to Khalīfa, p. 585, he was Sulaymān b. Ḥabīb b. al-Muhallab (b. Abī Ṣufra). Al-Muhallab b. Abī Ṣufra, his grandfather, was a famous army commander who had served as governor over al-Ahwāz for ʿAbd al-Malik while two of his sons, al-Mughīra and Saʿīd (Sulaymān's uncles), served as governors over portions of Fārs (Khalīfa, p. 340). It is therefore evident that there was an historical connection between the Muhallabids and al-Ahwāz and Fārs.

[16] Abū Mikhnaf: al-Ṭabarī, 2, p. 1946; al-Madā'inī al-Ṭabarī, 2, 1977f.; compare Khalīfa, p. 585f.

[17] Abū Mikhnaf: al-Ṭabarī, 2, p. 1947; al-Madā'inī: al-Ṭabarī, 2, p. 1978.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

mān had doubtless been in control of Rāmhurmuz (in Khūzistān/al-Ahwāz) in the previous year also, in 128, and had nominally offered allegiance to Ibn Muʿāwiya for the sake of legitimizing his own independence from, and opposition to, Umayyad authority. As a token of his recognition, Sulaymān had probably allowed Ibn Muʿāwiya to issue coinage in Rāmhurmuz, which accounts for the features shared by the Rāmhurmuz dirham with the others of Group 1-A.

GROUP 1-B

Hamadhān, 129 (no. 8); Māhī (Māhay ?),[18] 129 (no. 9);
al-Rayy, 129 (no. 10), 130 (no. 11)

In 129/746–47 Ibn Muʿāwiya left Iṣbahān to take up residence at Iṣṭakhr, and appointed his brother, al-Ḥasan b. Muʿāwiya, as governor over al-Jibāl.[19] The dirhams of Group 1-B may be attributed to al-Ḥasan's governorship over the region. The existence of fulūs of al-Rayy, 129 (no. 32) which carry the legend "authorized by the *amīr* ʿAbd Allāh b. Muʿāwiya" does not diminish the probability that al-Ḥasan, and not ʿAbd Allāh, was directly responsible for the authorization of minting the dirhams of this group, since al-Ḥasan was governing in behalf of his brother, or the fals of al-Rayy could have been authorized and struck prior to ʿAbd Allāh's departure from al-Jibāl. The dirhams of Jayy, 129 (no. 3), and al-Taymura, 129 (no. 5), which share the features of Group 1-A, were authorized by ʿAbd Allāh b. Muʿāwiya himself before he departed for Iṣṭakhr.

The dirham of al-Rayy, 130 (no. 11) probably has seven annulets in the obverse outer marginal legend (six are visible clearly), but does *not* lack one between the words *wa-miʾa* and *bism* as in the other coins in

[18] Perhaps Māhay, which resembles a form of the Arabic dual, is the more suitable vocalization. Zambaur (*Münzprägungen*, p. 223; see n. 12, above) suggests that Māhī (Māhay) was probably an official designation for al-Māhān (Dīnawar and Nihāwand). The inclusion of the Māhī (Māhay) dirham among the others of group 1-B due to the shared features of design, and the specific mention of al-Māhān by the literary sources as one of the localities over which Ibn Muʿāwiya had control, strengthen the identification of Māhī (Māhay) with al-Māhān.

[19] al-Madāʾinī: al-Ṭabarī, 2, p. 1977.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Group 1-B. The year "130" is composed of only two Arabic word groups, *thalāthīn* and *wa-mi'a*, instead of the three word groups of the preceding years, e.g. *tisaʿ wa-ʿishrīn wa-mi'a*, "129." This necessitated an annulet to be inserted between the words *wa-mi'a* and *bism* in order to preserve the seven annulet pattern.[20] Because of the correspondence of its features with the others of Group 1, this coin serves as evidence that partisans loyal to Ibn Muʿāwiya still had control of al-Rayy for part of the year 130/747–48. Because the design and annulet patterns of this coin conform to the dirhams of Ibn Muʿāwiya, and not to those of Abū Muslim (Group 2), it cannot, as Zambaur claimed,[21] be evidence for Abū Muslim's conquest of the city in that year. Al-Rayy was temporarily retaken by Umayyad forces in 130, and there are fulūs struck in al-Rayy in that year which carry the name of Yazīd b. ʿUmar (b. Hubayra), the Umayyad governor over al-ʿIrāq.[22] The city fell to Abū Muslim's forces in 131/748–49.[23]

There exist two specimens of the Māhī (Māhay ?), 129 (no. 19) dirham which bear a pyramid of three points directly to the right of the obverse field legend. It is possible that the symbol was added to the dies by Manṣūr b. Jumhūr, who, according to Abū Mikhnaf, took control of al-Māhān and al-Jibāl in 129/746–47.[24] Manṣūr had pledged allegiance to ʿAbd Allāh b. Muʿāwiya in al-Kūfa in 127/744.[25] A Yamanite, he

[20] In the dirham of Jayy, 130 (no. 18) we have the same situation, and each word in the obv. outer margin is separated from the adjacent words by an annulet in order to preserve the 7-annulet pattern.

[21] Zambaur, *Münzprägungen*, p. 129, n. 7.

[22] J. Walker, *A Catalogue of the Arab-Byzantine and Post-Reform Umaiyad Coins* (London, 1956), pp. 262f.; Miles, *NHR*, pp. 18–20.

[23] See note 40, below.

[24] al-Ṭabarī, 2, p. 1946.

[25] al-Ṭabarī, 2, p. 1883. Compare the report of al-Madā'inī that Manṣūr b. Jumhūr was with Ibn Muʿāwiya in 129/746–47 in Fārs (al-Ṭabarī, 2, p. 1977). Ibn Muʿāwiya had revolted in the beginning of 127, in al-Muḥarram/October-November 744. After Ibn Muʿāwiya had been driven out of al-Kūfa, and the Khārijīs, led by al-Ḍaḥḥāk b. Qays al-Shaybānī, took the city, Manṣūr remained in Wāsiṭ with ʿAbd Allāh b. ʿUmar, the former governor of al-ʿIrāq, who had been appointed by Yazīd III. Manṣūr and ʿAbd Allāh soon pledged allegiance to al-Ḍaḥḥāk when the Khārijīs were besieging Wāsiṭ, in order to allow the Khārijīs to direct their energies against Marwān II, their common foe (al-Ṭabarī, 2, p. 1907 ; Khalīfa, p. 571).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

had served briefly as governor over al-ʿIrāq in 126/744, in the service of Yazīd III.[26] What concerns us is that Yazīd III was a reformist whose policies resembled in some ways those of the reformist caliph ʿUmar b. ʿAbd al-ʿAzīz. Certain coinage associated with ʿUmar b. ʿAbd al-ʿAzīz carries the same symbol.[27] It is conceivable that this symbol became associated with policies which the literary sources refer to as Yamanite, characterized by opposition to the so-called Qaysite expansionism. There are fulūs of al-Kūfa and Jurjān, both dated 126, the year of Yazīd III's brief reign and of Manṣūr b. Jumhūr's brief governorship over al-ʿIrāq. Both of these coins carry the triple-point symbol, and may have been struck by authority of Manṣūr, Yazīd III, or their supporters. Almost all of Abū Muslim's coinage bears pyramids of triple annulets.[28]

GROUP 1–C:

Iṣṭakḥr, 128 (no. 12), 129 (no. 13); Darābjird, 129 (no. 14);
Sābūr, 129 (no. 15); Ardashīr Khurra, 129 (no. 16);
Jayy, 129 (no. 17), 130 (no. 18)

According to the account of al-Madā'inī, a *mawlā* of the Banū Yashkur named Muḥārib b. Mūsā achieved a certain amount of power in Fārs in 128/745–46 and 129.[29] He conquered Iṣṭakhr and Shīrāz[30] in 128, and

[26] See DeShazo-Bates (above, n. 5), p. 117; see al-Ṭabarī, 2, p. 1837; compare al-Ṭabarī, 2, pp. 1845f. and 1854f.; Khalīfa, p. 559, reports that Manṣūr may have forged a document of appointment.

[27] There are, for example, fulūs from al-Kūfa, 100–2, the period of the governorship of ʿAbd al-Ḥamīd b. ʿAbd al-Raḥmān, the appointee of ʿUmar II, and fulūs of Wāsiṭ, al-Rayy, and Jayy, all 101, in which year ʿUmar II was still caliph, all of which in addition carry the slogan *amar Allāh bi-'l-wafā' wa-'l-ʿadl*, "God has ordered faithfulness and justice." Among postreform Umayyad dirhams, the symbol seems also to be associated with coins struck in Khurāsān. However, there are many other coins which have the symbol, and the problem needs further research.

[28] See below pp. 175 *ff.*

[29] al-Madā'inī: al-Ṭabarī, 2, pp. 1976f. See J. Wellhausen, *The Arab Kingdom and Its Fall*, trans. M. G. Weir (Beirut, 1963), p. 385.

[30] The name Shīrāz does not appear on postreform Umayyad dirhams, although it is found on fulūs struck in the Umayyad period (see Zambaur, *Münzprägungen*, p. 163, and fals no. 44, below). Instead, the name of the district Ardashīr Khurra,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

to legitimize his own authority over the regions he had conquered, he pledged allegiance to ʿAbd Allāh b. Muʿāwiya. Sulaymān b. Ḥabīb, another semi-independent warrior, who had fled from al-Ahwāz, went to Fārs and took control of Sābūr, probably in 129, and also pledged allegiance to Ibn Muʿāwiya.[31] Thus, by 129 much of Fārs had fallen, at least nominally, under the sway of ʿAbd Allāh b. Muʿāwiya. In 129 Muḥārib b. Mūsa went to Iṣbahān. Ibn Muʿāwiya left Iṣbahān, and took up residence at Iṣṭakhr, and appointed his brother, Yazīd b. Muʿāwiya, as governor over Fārs.[32]

Although it might seem convenient at first glance to ascribe the dirhams of Group 1–C to Yazīd b. Muʿāwiya, the existence of dirhams of Jayy, 129 (no. 17) and 130 (no. 18), which share the features of the Fārs dirhams inclines us to do otherwise. The coins of this group were probably issued by authority of Muḥārib b. Mūsā, who, as indicated, was in control of much of Fārs in 128 and 129, and pledged loyalty to Ibn Muʿāwiya. Sulaymān b. Ḥabīb, who at this time was in control of Sābūr, probably allowed the dominant Muḥārib to issue coins in Sābūr, (as he had allowed Ibn Muʿāwiya to do in Rāmhurmuz in the previous year) on behalf of Ibn Muʿāwiya. When Muḥārib went to Iṣbahān—that is, Jayy— in 129, he undoubtedly took with him his die engraver, who proceeded to produce dirhams at Jayy in the same style as those he had produced in the cities of Fārs. The dirhams of Jayy, 129 (no. 3) and al-Taymura, 129 (no. 5) with the features of Group 1–A were struck by Ibn Muʿāwiya's own minter before he departed Iṣbahān for Iṣṭakr.

Muḥārib's first known issue, the dirham of Iṣṭakhr, 128 (no. 12), is anomalous in two respects. First, it is the only dirham of the partisans of ʿAbd Allāh b. Muʿāwiya which retained the customary expression *hādhā 'l-dirham* in the obverse outer margin. Second, it is the only dirham in this study on which some of the words in the obverse outer margin are divided internally by annulets (*al-di* O *rham* and *bi* O *ṣṭakhr*).

of which Shīrāz was the chief city, was used on the dirhams (see Zambaur, *Münzprägungen*, p. 41).

[31] al-Madā'inī: al-Ṭabarī, 2, p. 1978; see pp. 169 f., above.

[32] al-Madā'inī: al-Ṭabarī, 2, p. 1977.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

GROUPS 2 AND 3:

Dirhams of Abū Muslim and His Lieutenants

According to tradition Abū Muslim had been sent as an agent, assigned by the leaders of the ʿAbbāsid conspiracy to carry out political and military activities in Khurāsān in behalf of the ʿAbbāsid cause.[33] The military campaign waged from Khurāsān westward against the Umayyads, directed by Abū Muslim and spearheaded by his generals, ostensibly operating in the service of the ʿAbbāsid family, resulted in the overthrow of the Umayyads, and enabled the ʿAbbāsid family to establish itself in the caliphate. Since the ʿAbbāsids based their claim to the caliphate on their kinship with the Prophet, the sufficiently vague and non-specific slogan calling for preference for the *ahl al-bayt*, which had previously been employed by ʿAbd Allāh b. Muʿāwiya on his coinage, was equally suitable for the ʿAbbāsid campaign, and Abū Muslim adopted it for use on his coinage.[34]

It seems that within time Abū Muslim's role in the movement became more than that of merely an agent for a distant cabal. Eventually Abū Muslim was using the ʿAbbāsids for his own ends (rather than vice versa), and exploiting their claims to the caliphate as a legitimizing factor for his own revolutionary activity. After their installation in the caliphate the ʿAbbāsids grew to realize Abū Muslim's power and intentions, and understood that their victory over the Umayyads was for naught as long as Abū Muslim stood in their way.[35] Abū Jaʿfar al-Manṣūr, the second ʿAbbāsid caliph, eliminated Abū Muslim by assassination in 137/754–55, leaving the ʿAbbāsids with full political and military independence and power.[36]

[33] See Shaban (above, n. 2), chap. 9.

[34] Compare Shaban (above n. 2), p. 155.

[35] See al-Ṭabarī, 3, p. 67, where it is implied that Abū 'l-ʿAbbās was completely under the control of Abū Muslim. In another account, the historian al-Dīnawarī reports that Abū Jaʿfar, recognizing the power of Abū Muslim, tells his brother, the caliph Abū 'l-ʿAbbās, " You are not (really) caliph as long as Abū Muslim is alive" (*al-Akhbār al-ṭiwāl*, ed. ʿA. M. ʿĀmir [Cairo, 1960], p. 376. = ed. V. Guirgass [Leiden, 1888], pp. 373f.).

[36] A companion of Abū Jaʿfar, upon seeing the corpse of Abū Muslim, is quoted as saying to Abū Jaʿfar, "This day marks the beginning of your caliphate" (that is, in

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

GROUP 2:

Balkh, 130 (no. 19), 131 (no. 20), 132 (no. 21);
Marw, 130 (no. 22); Jurjān, 130 (no. 23); al-Rayy, 131 (no. 24)

By 130/747–48 Abū Muslim had much of Khurāsān under his control.[37] He occupied Marw on 9 Jumādā I 130/15 January 748.[38] Jurjān was captured by Qaḥṭaba b. Shabīb, Abū Muslim's general, at the end of 130, in Dhū 'l-Ḥijja/August 748.[39] Al-Rayy, which had been retaken by Umayyad forces from partisans of ʿAbd Allāh b. Muʿāwiya in 130, and held for part of 131, was captured by Qaḥṭaba's son, al-Ḥasan, and occupied by Qaḥṭaba in 131.[40]

The triple-annulet symbol found on the coins in Group 2 is present on all the known silver and copper issues of Abū Muslim, except for fulūs of 131 (no. 36), which have what resembles a fleur-de-lis.[41]

GROUP 3:

Marw, 131 (no. 25), 132 (no. 26), 133 (no. 27)

The dirhams of this group must be attributed to Abū Muslim, who was the strongest power in Marw in these years, and was the only one with

---

fact, not only in name; literally: "Begin counting the days of your caliphate from today") (al-Ṭabarī, 3, p. 116).

[37] al-Ṭabarī, 2, pp. 1984ff., and 1997ff.; compare al-Ṭabarī, 2, p. 1972; Shaban, (above, n. 2), pp. 160–63.

[38] al-Ṭabarī, 2, p. 1987.

[39] Khalīfa, pp. 591f.; al- Yaʿqūbī, *al-Taʾrīkh*, 2, ed. M. T. Houtsma (Leiden, 1883), p. 410; al-Madā'inī: al-Ṭabarī, 2, p. 2005; *EI*², s.v. "Ḳaḥṭaba b. Shabīb " (Sharon). This means that the dies for the dirham of Jurjān, 130 (no. 23) must have been engraved, and the coins struck, within a period of less than a month, unless we wish to alter our notions about the validity of dates inscribed on early Islamic coinage. The possibility exists that the dies for this coin were cut in anticipation of the conquest of the city, or were used after the year 131 had already commenced.

[40] al-Madā'inī: al-Ṭabarī, 3, p. 3. See fals no. 35.

[41] Coins struck by two of Abū Muslim's deputies also have the triple-annulet symbol (see fulūs nos. 46 and 47). Compare fals no. 45.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

sufficient power and authority to issue coinage there.[42] A possible reason for the dropping by Abū Muslim of the slogan calling for loyalty to the *ahl al-bayt* was that the supporters of Juday' al-Kirmānī and his son, who were by no means interested in the *ahl al-bayt*, still constituted a powerful force in Marw.[43] When Abū Muslim entered Marw in 130, and introduced his dirham bearing Qur'ān 42:23 (no. 22), he may have alienated a portion of the population still loyal to al-Kirmānī's faction. Realizing this, and attempting to bring al-Kirmānī's faction into his own fold, he judiciously dropped the slogan on the coinage in subsequent years in Marw.

Another possibility is that the sloganless dirhams served as an experiment at a normalized currency type, intended to reflect a government independent of 'Abbāsid or Shī'a commitments. Perhaps the retreat and death of Naṣr b. Sayyār, the Umayyad governor over Khurāsān, in 131/748, may have been interpreted by Abū Muslim as the true commencement of his own reign in Khurāsān.[44] The dirhams of Marw, 131 may thus represent the earliest "post-revolutionary" coinage, antedating the sloganless 'Abbāsid type of 132 by one year.[45]

GROUP 4:
Coinage of Khārijī Revolutionaries, and of an Independent Rebel in Khurāsān, Not Affiliated With the Khārijīs

GROUP 4–A:
Khārijīs: al-Kūfa, 128 (no. 28); Tanbūk (?), 133 (no. 29).

The two dirhams minted by Khārijīs carry the slogan *lā ḥukma illā li-llāh*, usually translated as "Judgment belongs to God alone."[46]

[42] Compare Shaban (above, n. 2), pp. 160–63. On the coins of this group, compare J. G. Stickel, "Besprechung von: *Catalogue des monnaies musulmanes de la bibliothèque nationale, I* (Lavoix)," *ZDMG* 43 (1889), p. 682, and Van Vloten (above, n. 1), p. 442.

[43] See Shaban (above, n. 2), p. 160. On Juday' b. 'Alī al-Kirmānī, see pp. 178-79, below.

[44] The death of Naṣr was on 12 Rabī' I 131/9 November 748, according to a report in al-Ṭabarī, 3, p. 2.

[45] Compare the regular 'Abbāsid post-revolutionary dirham type distinguished by three groups of triple annulets.

[46] Compare Qur'ān 12:40.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

This phrase is supposed to have originated as a sectarian slogan when the original Khārijīs seceded from the army of ʿAlī b. Abī Ṭālib after the battle of Ṣiffīn in 37/657, in protest against his decision to submit to arbitration (*taḥkīm*) in his dispute with Muʿāwiya over the caliphate. The development of the so-called Khārijī movement(s) during the Umayyad period is a complex matter.[47] However, a glimpse at the activities of many of the groups and individuals referred to by the literary sources as Khārijīs or any of several synonyms (Ḥarūrīs, Shurāt, Azraqīs, and others), reveals that they do not have much, if anything, to do with "judgment" of any sort. The slogan allegedly used by the original Khārijīs was maintained by some of the later Khārijīs to lend to their activities a religious and historical legitimacy and sense of continuity. Their motto might also be translated "Authority (or "Law") belongs to God alone," which would more appropriately characterize their activities during the Umayyad period.[48]

A Khārijī army led by al-Ḍaḥḥāk b. Qays al-Shaybānī entered and took control of al-Kūfa in 127/745.[49] Al-Ḍaḥḥāk himself did not remain long, if at all, in al-Kūfa. After his conquest of al-Kūfa, al-Ḍaḥḥāk left a lieutenant to govern the city, and marched against Wāsiṭ, in Ramaḍān 127/June-July 745.[50] When the former Umayyad governor over al-ʿIrāq,

[47] See R. Brünnow, "The Kharijites under the first Umayyads," trans. S. Khuda Bukhsh, in the latter's *Contributions to the History of Islamic Civilization* (Calcutta, 1930), pp. 153–200; W. M. Watt, "Kharijite Thought in the Umayyad Period," *Islam*, vol. 36, pt. 3 (1961), pp. 215–31; Wellhausen (above, n. 8), pt. 1; Shaban (above, n. 8), index, s.v. "khawārij."

[48] See Shaban (above, n. 2), pp. 143, 147, and (above, n. 8), pp. 96ff. The name "Khārijī" supposedly derives from a passage in the Qur'ān, 4:100 (see Brünnow [above, n. 47], pp. 177f., which is repeated by R. Nicholson, *A Literary History of the Arabs* [Cambridge, 1969], p. 209). It seems that in some instances the literary sources refer to certain rebels as "khārijīs," having in mind the simple meaning of the verb *kharaja* (*ʿalā*), "to rebel (against)." Compare the statement of T. Nöldeke that "Ḵharijite was often little more than a polite name for bandit (in *Sketches from Eastern History*, trans. J. S. Black ([Beirut, 1963, reprint of 1892 edition], p. 177). The Khārijīs are sometimes referred to in the literary sources as al-Muḥakkima, "the ones who utter the slogan *la ḥukma illā li-llāh*," and the verb *ḥakkama* is used with the meaning "to revolt as a Khārijī" (see, e.g. Khalīfa, p. 261).

[49] Khalīfa, p. 570; al-Ṭabarī, 2, p. 1903; see *EI*², s.v. "al-Daḥḥāk b. Ḳays al-Shaybānī," (Vaglieri); al-Husaynī.

[50] Khalīfa, pp. 570f.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ʿAbd Allāh b. ʿUmar, pledged allegiance to him, al-Ḍaḥḥāk headed for al-Mawṣil, whose inhabitants had invited him to come to "liberate" their city.[51] He was soon thereafter killed in battle by Marwān II. In 128 Yazīd b. ʿUmar b. Hubayra was appointed by Marwān as governor over al-ʿIrāq. He marched against al- Kūfa, and routed the Khārijīs whom al-Ḍaḥḥāk had left in control of the city when he went to al-Mawṣil.[52] Ibn Hubayra issued his own dirhams in al-Kūfa in 128 and 129.[53]

The specific circumstances surrounding the striking of the "Tanbūk" dirham, and the identity of its issuer, are not clear. The reading "Tanbūk" may not be correct, but it is used here for the sake of convenience.[54] The resemblences between the Khārijī dirhams of al-Kūfa, 128 and those of "Tanbūk," 133 are too striking to have been the result of mere coincidence, although both are variants of the standard postreform Umayyad type. The designer of the "Tanbūk" coin probably wished to preserve or revive what had become a standard or "classical" Khārijī dirham type, and used the earlier piece as a model.

GROUP 4–B:

al-Kirmānī: Marw, 128 (no. 30)

Judayʿ b. ʿAlī al-Kirmānī (not to be confused with his son, ʿAlī b. Judayʿ, sometimes called Ibn al-Kirmānī) was chief of the Azd, a Yamanite tribe, in Khurāsān.[55] Rebelling against Umayyad authority in Khurāsān, he seized Marw in 128/745–46, when the Umayyad governor,

[51] al-Ṭabarī, 2, p. 1938. See Rotter (above, n. 1), p. 193. See fals no. 33, struck by al-Ḍaḥḥāk in al-Mawṣil.

[52] Khalīfa, p. 578f.

[53] See DeShazo-Bates (above, n. 5), pp. 118, and 115, n. 19.

[54] The coin has been studied, and described in detail by H. Nützel, "Muhammedanischer Münzfund von Pinnow," *ZNum* 17 (1890), pp. 272–73; Sourdel, pp. 5–9; Jaeckel (above, n. 1), pp. 189–90. None of these authorities reached a definitive conclusion with respect to the reading of the name of the place of issue.

[55] On al-Kirmānī, see Ḥamīd (above, n. 1), pp. 26–28; Shaban (above, n. 2), index; Wellhausen, (above, n. 29), index; Ibn Ḥazm, *Jamharat ansāb al-ʿArab*, ed. ʿA. M. Hārūn (Cairo, 1391/1971), p. 381.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Naṣr b. Sayyār, withdrew from the city.[56] After short-lived alliances with al-Ḥārith b. Surayj (a rival revolutionary in Khurāsān) and Abū Muslim, al-Kirmānī was killed in 129 as a result of machinations by Naṣr b. Sayyār. His sons, ʿAlī and ʿUthmān, carried on his struggle for a short time, but were ultimately put to death by Abū Muslim.[57]

The obverse outer margin of the dirham issued by al-Kirmānī carries the legend *mim-mā amara bi-hi al-amīr al-Kirmānī b. ʿAlī*, "authorized by the *amīr* al-Kirmānī b. ʿAlī." This is the only known post-reform dirham struck in the Umayyad period which bears the name of anyone other than the Prophet Muḥammad.

The similarity in design of al-Kirmānī's dirham and those of the Khārijīs is conceivably not due merely to coincidence. Although they are both basically variants of the standard postreform Umayyad type, the number of shared features is remarkable. It is possible that examples of the Kharijī dirhams of al-Kūfa quickly made their way eastward to Khurāsān, where they came to the attention of al-Kirmānī. The large number of extant specimens of the Khārijī dirhams of al-Kūfa is an indication that mintage may have been high, and the coins may have seen circulation over a wide area.[58] Al-Kirmānī may have heard of the exploits of al-Ḍaḥḥāk and the Khārijīs, and perhaps out of some sympathy for their activities and objectives, he possibly selected the Khārijī dirham as a model for a revolutionary type, substituting his own name for the Khārijī slogan.

CATALOGUE

For a description of the obverse field, the reverse field, the reverse marginal legend, and reverse annulets of all the dirhams; and the obverse inner marginal legend of the dirhams of Ibn Muʿāwiya and Abū Muslim, with the exception of Marw, 131–33 (nos. 25–27); and the obverse outer margin of nos. 25–27, see pages 164-67, above. Illustrated coins are marked by an asterisk (*).

[56] Khalīfa, p. 580; al-Ṭabarī, 2, p. 1930; Shaban (above, n. 2), p. 137.

[57] See Shaban (above, n. 2), pp. 137, and 159–63.

[58] Compare also the relatively large number of specimens of a Khārijī fals of al-Mawṣil (no. 33).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

1. *Jayy*, 127
   Obv. outer margin:
   بسم ○ الله ○ ضرب ○ بجى ○ سنة ○ سبع ○ وعشرين ○ ومئة
   *Paris (Lavoix, no. 556); 2.85 g
   Leningrad (Markov, p. 13).

2. *Jayy*, 128
   Obv. outer margin: as no. 1, but ثمان rather than سبع
   *ANS (63.172; G. Miles, "Al-Mahdī al-Ḥaqq," p. 333f.); 2.86 g, 24 mm
   ANS (66.126; unpublished); 2.82 g
   Paris (unpublished)
   Cairo (S. Lane-Poole, "Catalogue of the Collection of Mohammedan Coins belonging to E. T. Rogers Bey," *NC* 1883, p. 219; *Khediv* 246); 2.60 g
   Leningrad (Markov, p. 13)
   Baghdad (al-Bakrī [1968], p. 121; B. and N., p. 137, no. 248); 2.90 g, 25 mm

3. *Jayy*, 129 (compare no. 17)
   Obv. outer margin: as no. 1, but تسع rather than سبع
   *ANS (70.83; unpublished); 2.88 g
   Berlin (Nützel, p. 109, no. 599)

4. *Al-Taymura*, 128
   Obv. outer margin:
   بسم ○ الله ○ ضرب ○ بالتيمرة ○ سنة ○ ثمان ○ وعشرين ○ ومئة
   *ANS (Slocum Hoard; unpublished); 2.78 g
   Paris (Lavoix, no. 554); 2.91 g
   Paris (Lavoix, no. 555); 2.85 g
   Private collection of C. and E. Zygman (Miles, *Persepolis*, p. 67, n. 88)
   Baghdad (al-Naqshabandī, no. 277; B. and N., p. 136, no. 246); 2.81 g, 25 mm

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

5. *Al-Taymura*, 129
   Obv. outer margin: as no. 4, but تسع rather than ثمان
   Istanbul (Artuk, *Katalogu*, no. 152); 2.80 g, 25 mm
   N. Siouffi, *Tables numismatiques* (Mosul, 1879–80), p. 45

6. *Al-Rayy*, 128
   Obv. outer margin:
   بسم ○ الله ○ ضرب ○ بالرى ○ سنة ○ ثمان ○ وعشرين ○ ومئة
   Private collection of S. M. Stern (S. M. Stern, rev. of G. Miles, *Persepolis* in *NC* 1961, p. 261)
   *Istanbul (Artuk, *Denizbaci*, no. 145; Artuk, *Kataloğu*, no. 151); 2.75 g, 25 mm

7. *Rāmhurmuz*, 128
   Obv. outer margin: as no. 6, but برامهرمز rather than بالرى
   *ANS (66.126; unpublished); 2.76 g
   London (*BMCOriental* 1, p. 33, no. 216); 2.82 g
   Istanbul (Ghalib, no. 229)
   Istanbul (Artuk, *Denizbaci*, no. 144; Artuk, *Kataloğu*, no. 150); 2.60 g, 23 mm
   Private collection of A. DeShazo (unpublished); 2.82 g
   Private collection of. S. Album (unpublished)

8. *Hamadhān*, 129
   Obv. outer margin:
   بسم ○ الله ○ ضرب ○ بهمذان ○ سنة ○ تسع ○ وعشرين ○ ومئة
   London (W. Theobald collection; Lane-Poole, "Fasti Arabici III," *NC* 1885, no. 12; *BMCOriental*, 9, p. 37, no. 216k); 2.72 g

9. *Māhī* (*Māhay* ?), 129
   Obv. outer margin: as no. 8, but باهى rather than بهمذان
   Paris (Lavoix, no. 560)
   *Paris (unpublished)
   Istanbul (Artuk, *Kataloğu*, no. 149); 2.50 g, 23 mm
   P. Scherzl, no. 5866.

The Istanbul and the unpublished Paris specimens have a pyramid of three points on the obverse, to the right of the field legend.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

10. *Al-Rayy*, 129
Obv. outer margin: as no. 8, but بالرى rather than بهمذان
*Paris (Lavoix, no. 558; Miles, *NHR*, no. 36A); 2.90 g
Kabul (Sourdel, no. 34)

11. *Al-Rayy*, 130
Obv. outer margin:
بسم ○ الله ○ ضرب ○ بالرى ○ سنة ○ ثلثين ○ ومئة ○
London (E. G, Rodgers collection; Allan, p. 195)

12. *Iṣṭakhr*, 128
Obv. outer margin:
بسم الله ○ ضرب ○ هذا الد ○ رهم با ○ صطخر سنة ○ ثمان وعشرين ○
*Baghdad (B. and N., p. 135, no. 244)

13. *Iṣṭakhr*, 129
Obv. outer margin:
بسم ○ الله ○ ضرب ○ باصطخر ○ سنة تسع ○ وعشرين ○ ومئة ○ ومئة ○
Paris (Lavoix, no. 1684); 2.94 g
Paris (unpublished)
Istanbul (Artuk, *Denizbaci*, no. 142; Artuk, *Kataloğu*, no. 147); 2.70 g, 24 mm
Leningrad (Markov, p. 13)
Private collection of C. Azami (unpublished)

14. *Darabjird*, 129
Obv. outer margin: as no. 13, but بدربجرد rather than باصطخر
London (Allan, p. 195)
Private collection of E. Leuthold (unpublished)
Private collection of C. Azami (unpublished)

15. *Sābūr*, 129
Obv. outer margin: as no. 13, but بسابور rather than باصطخر
*London (Codrington collection; Codrington, p. 269)
J. G. DaCunha, *Catalogue of the Coins in the Numismatic Collection belonging to . . .* (Bombay, 1888-89), p. 23

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Baghdad (al-Naqshabandī, no. 278; B. and N., p. 138, no. 251); 2.35 g, 23 mm

16. *Ardashīr Khurra*, 129

Obv. outer margin: as no. 13, but باردشير خرة rather than باصطخر

Istanbul (Yapı ve Kredi Bankası collection; *Islamiyette Paranın Doğuşu ve gelişmesi* [Istanbul, 1971], p. 12, no. 22 — illus. with hand-drawing)

17. *Jayy*, 129 (compare no. 3)

Obv. outer margin: as no. 13, but بجى rather than باصطخر

ANS (73.245; unpublished); 2.93 g
*ANS (71.316; unpublished); 2.85 g
ANS (71.316; unpublished); 2.85 g
Paris (Lavoix, no. 557); 2.84 g
Paris (unpublished)
Paris (unpublished)
Cairo (Fahmī, no. 591); 2.78 g
Private collection of E. Leuthold (unpublished)
Berlin (Nützel, p. 110, no. 600)

The following specimen is undescribed and may belong either to no. 17 or to no. 3: Private collection of C. and E. Zygman (Miles, *Persepolis*, p. 67, n. 88).

18. *Jayy*, 130

Obv. outer margin: as 11, but بجى rather than بالرى

*Private collection of J. Slocum (2.89 g)

19. *Balkh*, 130

Obv. outer margin:

بسم الله ضرب ٭ هذا الدرهم ٭ ببلخ سنة ٭ ثلثين ومئة ٭

London (*BMCOriental* 1, p. 225, no 2; *BMCOriental* 9, p. 37, no. 215b); 2.40 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

20. *Balkh*, 131
Obv. outer margin:
بسم الله ضرب ٭ هذا الدرهم ٭ ببلخ سنة احدى ٭ وثلثين ومئة ٭
Paris (Lavoix, no. 553); 2.28 g
Baghdad (al-Bakrī [1970], p. 334; B. and N., p. 135, no. 245); 3.00 g, 27 mm

21. *Balkh*, 132
Obv. outer margin: as no. 20, but اثنين rather than احدى
Istanbul (I. Artuk, "Abbasîler ve Endülüs Emevîleri Zamaninda. Basılmiş Mühim Sikkelarden Birkaçi," 3 [Istanbul, 1953], p. 135).
Istanbul (Artuk, *Denizbaci*, p. 36, no. 141; Artuk, *Kataloğu*, p. 39, no. 146); 2.30 g, 26 mm

22. *Marw*, 130
Obv. outer margin : as no. 19, but بمرو rather than ببلخ
Private collection of J. Avent (S. Lane-Poole, "Fasti Arabici VI," *NC* 1887, p. 335, no. 5)
Private collection of O. Codrington (Codrington, p. 269)

23. *Jurjān*, 130
Obv. outer margin: as no, 19, but بجرجان rather than ببلخ
*London (*BMCOriental* 9, p. 37, no. 215c); 2.915 g

24. *Al-Rayy*, 131
Obv. outer margin: as no. 20, but بالرى rather than ببلخ
Copenhagen (C. Tornberg, *Symbolae ad rem numariam Muhammedanorum* [Tornberg, 1847]; S. Lane-Poole, "The Oriental Cabinet at Copenhagen," *NC* 1876, p. 267; J. Østrup, no. 174; Miles, *NHR*, no. 38A); 2.59 g

25. *Marw*, 131
Obv. inner margin :
بسم الله ضرب هذا الدرهم بمرو سنة احدى وثلثين ومئة
ANS (63.172; unpublished); 2.86 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

*ANS (71.316; unpublished); 2.87 g
Paris (Lavoix, no. 561); 2.84 g
Leningrad (Markov, p. 13)

26. *Marw*, 132
Obv. inner margin: as no. 25, but اثنين rather than احدى
ANS (71.316; unpublished); 2.53 g
ANS (73.245; unpublished); 2.55 g
*ANS (Newell collection; unpublished); 2.85 g
Paris (Lavoix, no. 562); 2.85 g
Paris (Lavoix, no. 563); 2.85 g
Paris (unpublished)
London (unpublished)
Berlin (Nützel, p. 107, no. 587); 2.83 g
Istanbul (Ghalib, no. 232)
Leningrad (Markov, p. 12)

27. *Marw*, 133
Obv. inner margin: as no. 25, but ثلث rather than احدى
*ANS (66.126; unpublished); 2.82 g
Paris (Lavoix, no. 583); 2.82 g
Leningrad (Markov, p. 12)
Stickel (see above, n. 42), pp. 692f.
Baghdad (al-Bakrī [1970], p. 334, no. 14147); 3.10 g, 27 mm
W. Anderson and R. Vasmer, *Der Chalifenmunzfund von Kochtel* (Dorpat, 1926), no. 10

28. *Al-Kūfa*, 128
Obv. inner margin:
بسم الله ضرب هذا الدرهم بالكوفة سنة ثمان وعشرين ومئة
Obv. outer margin:
○ ○ لا حكم الا لله ○ ○
ANS (Nies Estate, 1927; unpublished); 2.91 g
*ANS (Newell Coll., 1917; unpublished); 2.96 g
Paris (Lavoix, no. 559); 2.87 g

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

London (W. Theobald collection; S. Lane-Poole, "Fasti Arabici III," *NC* 1885, no. 10; *BMCOriental* 9, p. 35, no. 150bb)
Cairo (Fahmī, no. 666); 2.78 g
Damascus (M. al-ʿUsh, *The Silver Hoard of Damascus*, Damascus, 1972, p. 274, no. 203)
Istanbul (Artuk, *Denizbaci*, no. 143; Artuk, *Kataloğu*, no. 158); 2.95 g, 24 mm
Istanbul (Yapı ve Kredi Bankası collection; *Islamiyette Paranın Doğuşu ve gelişmesi* [Istanbul, 1971], p. 12, no. 21 — illus. with hand-drawing)
Leningrad (Markov, p. 12)
Scherzl, no. 5865
Baghdad (al-Naqshabandī, no. 275; B. and N., p. 139, no. 252); 2.91 g, 26 mm
Baghdad (al-Naqshabandī, no. 275A; B. and N., p. 140, no. 253); 2.85 g, 25.5 mm
Baghdad (al-Naqshabandī, no. 275B); 2.33 g, 22 mm
Baghdad (al-Sarrāf collection; al-Ḥusaynī, p. 34, n. 18; B. and N. p. 141, no. 254.

29. *Tanbūk* (?), 133
Obv. inner margin:
بسم الله ضرب هذا الدرهم بتنبوك (؟) سنة ثلث وثلثين ومئة
Obv. outer margin:
لا ٥ حكم ٥ الا ٥ لله ٥
Berlin (H. Nützel, "Muhammedanischer Münzfund von Pinnow," *ZNum* 17 (1890), p. 272; Nützel, no. 598); 3.28 g, 25.5 mm
Kabul (Sourdel, no. 35); 3.1 g, 25.5 mm
Munich (Jaeckel [above, n. 1], pp. 181f., 189f.); 2.757 g, 24 mm

30. *Marw*, 128; *al-Kirmānī b. ʿAlī*
Obv. inner margin:
بسم الله ضرب هذا الدرهم بمرو سنة ثمان وعشرين ومئة

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Obv. outer margin

مما امر به ⊙ الامير ⊙ الكرمانى ⊙ بن على ⊙

Baghdad (al-Ḥusaynī, p. 34, n. 14, para. 3; al Bakrī (1970), p. 333; Ḥamīd [above, n. 1], pp. 26-28); 2.80 g, 26 mm

3. THE FULŪS

The fulūs under consideration in this study, in contrast to the dirhams, often carry the name of the person who authorized their issuance. However, they sometimes omit the year or the place of issue. In comparison to the dirhams, the fulūs are crudely designed and struck, and are generally much more worn. In some cases it is extremely difficult to read them because of wear and tear, and because of the crudeness of design and inscription. There is greater variety in the configurations of slogans, ornamentation, and names, hence there is a greater variety of types. The types of the same issuer are fairly similar, but no sharp distinctions can be made between the features of the fulūs of one issuer and those of another, as has been done with the dirhams in the preceding part of this study.

Several fulūs struck after the year 132/749–50 are included in the following list. The post–132 fulūs included here, the dates of which range from 133 to 138/755–56, are evidence for the persistence of revolutionary religio-political sentiments, and perhaps activities, by those who had been involved in the struggle against the Umayyads, even after the destruction of that house. The retention of the slogan calling for allegiance to the *ahl al-bayt* (Qur'ān 42:23) even after the accession of the ʿAbbāsids, may be an indication of discontent with the ʿAbbāsids on the part of certain individuals or groups, or of pro-ʿAlid sympathies among them. The slogan was used on coinage later in the ʿAbbāsid period, apparently by ʿAlid partisans.[59]

[59] See G. Miles, "Al-Mahdī al-Ḥaqq," pp. 329–41.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

TABLE 2[a]

The Fulūs — Summary of Legend Configurations

	Obverse		*Reverse*	
	Field	*Margin*	*Field*	*Margin*
		ʿABD ALLĀH B. MUʿĀWIYA		
31. al-Rayy, 127	place, year	—	issuer	Qur'ān 42:23
32. al-Rayy, 129	place, year	—	issuer	Qur'ān 42:23
		KHĀRIJĪS		
33. al-Mawṣil, n.d.	Q 112:1–2	tawḥīd I	M/R/A	issuer, place
34. al-Mawṣil, n.d.	●/ (cf. Q 18:37)/ ∴	O O O	M/R/A	issuer, place
		ABŪ MUSLIM		
35. al-Rayy, 131	tawḥīd II	Q 42:23	M/RA/place	issuer, year
36. No mint, 131	tawḥīd II	Q 42:23, 4× ✦	✦/M/R/A ✦	issuer, year
37. No mint, 132	tawḥīd II	Q 42:23, 4× ❀	M/ ⟡ /RA	issuer, year
38. No mint, 133	tawḥīd III	issuer, year	M/ ⟡ /RA	Q 42:23, 4× ❀
39. No mint, 134	tawḥīd III	issuer, year	M/ ⟡ /RA	Q 42:23, 4× ❀
40. No mint, 135	tawḥīd III	issuer, year	M/ ⟡ /RA	Q 42:23, 4× ❀
41. No mint, 136	tawḥīd II	issuer, year	M/ ⟡ /RA	Q 42:23, 4× ❀
		AL-SAFFĀḤ		
42. Tawwaj, 132	year	issuer, place	M/R/A	Q 42:23
		ANONYMOUS		
43. Bukhārā, 1xx	tawḥīd II	place, year	M/RA	Q 42:23, 4× ❀
44. Shīrāz, 130	tawḥīd IV	annulets (?)	∴/M/R/A	place, year
		ZUHAYR B. AL-TURKĪ		
45. No mint, 133	tawḥīd II	Q 42:23, 4× ✦	✦/M/R/A/ ✦	issuer, year
		KHĀLID B. IBRĀHĪM		
46. No mint, 138	tawḥīd II	issuer, year	∴/M/R/A/∴	Q 42:23, 4× ❀
		ʿIMRĀN B. ISMĀʿĪL		
47. Sijistān, 136	sittīn bi-dirham	issuer, 3× ❀	jā'iz bi-dānaq	place, year

[a] Explanation of entries in Table 2:

tawḥīd I: بسم الله لا اله الا الله وحده لا شريك له

tawḥīd II: لا اله / الا الله / وحده

tawḥīd III: لا اله ا/لا الله / وحده

tawḥīd IV: لا اله الا / الله وحده / لا شريك له

MRA: محمد رسول الله

Q 42:23, 4× ❀ : قل لا اسئلكم ❀ عليه اجراً ❀ الا المودة ❀ فى القربى ❀

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

31. *Al-Rayy*, 127; *ʿAbd Allāh b. Muʿāwiya*
Obv. field:
بسم الله ضر/ب هذا الفلس / بالرى سنة سبع و / عشرين ومئة
Rev. field:
مما امر به / الامير عبد الله / بن معوية
Rev. margin:
قل لا اسئلكم عليه اجراً الا المودة فى القربى
Private collection of Zambaur (Zambaur, *NZ*, p. 45, no. 5; Miles, *NHR*, no. 35)

32. *Al-Rayy*, 129; *ʿAbd Allāh b. Muʿāwiya*
Obv. field, variety 1:
بسم الله ضر/ب هذا الفلس / بالرى سنة تسع / وعشرين ومئة
Obv. field, variety 2:
بسم الله ضر/ب هذا الفلس / بالرى سنة تسع و/عشرين ومئة
Obv. field, variety 3:
بسم الله ضرب / هذا الفلس / بالرى سنة تسع / وعشرين ومئة
Obv. field, variety 4: double struck.
Rev. field, variety 1:
مما امر به ا/لامير عبد الله/بن معوية
Rev. field, variety 2:
مما امر به الا /مير عبد الله/بن معوية
Rev. field, variety 3: as no. 31
Rev. field, variety 4: double struck.
Rev. margin, varieties 1, 2, 3, and 4: as no. 31
ANS (Wood collection; Miles, *NHR*, no. 36C; Miles, *RIC*, no. 376); 4.46 g, 25 mm (variety 1)
UM (Univ. of Pennsylvania collection on permanent loan to the ANS; Miles, *NHR*, no. 36D) (variety 2)
Paris (Lavoix, no. 1588; Miles, *NHR*, no. 36B); 1.50 g, 19 mm (variety 3)
ANS (K. Minassian collection; Miles, *RIC*, no. 377); 2.80 g, 21 mm (variety 4)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

33. *Al-Mawṣil* (no year); *al-Ḍaḥḥāk* (*b. Qays al-Shaybānī*)
Obv. field, varieties 1 and 2:

الله / احد الله / الصمد

Obv. margin, variety 1:

بسم الله لا اله الا الله وحده لا شريك له

Obv. margin, variety 2:

بسم الله لا اله الا لله (sic) وحده لا شريك له

Rev. field, varieties 1 and 2:

محمد / رسول / الله

Rev. margin, varieties 1 and 2:

امر الضحاك بضرب هذا الفلس بالمو صل

(All of the following are also listed by Rotter, pp. 191f., no. 10; the first nine are variety 1):

London (*BMCOriental* 9, p. 101, no. 157t)
Cairo (Fahmī, no. 1004); 2.10 g, 19 mm
Private collection of G. Rotter (Rotter, no. 10, R8); 3.65 g, 22 mm
Private collection of G. Rotter (Rotter, no. 10, R9); 2.38 g, 19 mm
ANS (72.100); 4.24 g, 22 mm
ANS (49.163; Wright collection); 2.60 g, 20 mm
UM (Univ. of Pennsylvania collection on permanent loan to ANS); 3.54 g, 16.5 mm
ANS (71.132; Newell collection); 2.98 g, 17 mm
ANS (73.250; Miles, *RIC*, no. 104b); 3.84 g, 22 mm
ANS (73.250; Miles, *RIC*, no. 104a); 5.23 g, 19.5 mm (variety 2)

This type was probably issued in 128/746, when the Khārijī rebel al-Ḍaḥḥāk b. Qays al-Shaybāni took control of al-Mawṣil.[60] The haplography in variant 2 is an understandable die-cutter's error; the second of two adjacent *alif*'s was absent-mindedly omitted. The relatively large number of extant specimens of this coin and of another Khārijī issue, the dirham of al-Kūfa, 128 (no. 28), is noteworthy.

[60] See Rotter (above, n. 1), pp. 191–93. For an account of earlier Khārijī activity in al-Mawṣil, see Shaban (above, n. 8), pp. 106f.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

34. *Al-Mawṣil* (no year); *Zuhayr b. ʿAlqama*
Obv. field:

• / لا حول و / لا قوة الا / بالله / ∴

Obv. margin: divided into equal sections by three single annulets.
Rev. field: as no. 33.
Rev. margin:

بسم الله امس الامير زهير بن الامير علقمة بالموصل

Paris (Lavoix, no. 1636; Rotter, no. 11); 2.60 g. 22 mm
ANS (Newell collection; Rotter, no. 11); 2.68 g, 23 mm

This fals is discussed by Rotter, pages 194–95, who suggests that it was struck by a Khārijī governor of al-Mawṣil some time during the last decade of the Umayyad dynasty. As Rotter pointed out, the slogan *la ḥawla wa-lā quwwata illā bi-llāh*, "There is no power and no strength save in God,"[61] is similar in tone to the Khārijī motto *la ḥukma illā li-llāh*, although it does not have the specific associations with the Khārijīs that the latter slogan had.[62]

35. *Al-Rayy*, 131; *Abū Muslim*
Obv. field: perhaps as no. 36.
Obv. margin:

قل لا اسئلكم عليه اجراً الا المودة فى القر.القربى

Obv. (?) annulets: ○ ∴ ○ ∴ ○ ∴
Rev. field:

محمد / رسول الله / بالرى

Rev. margin:

بسم الله مما امر به ابو مسلم امير آل محمد سنة احدى وثلثين ومئة

Private collection of E. Zambaur (Zambaur, *NZ*, p. 46, no. 6; Miles, *NHR*, no. 38B)

This fals corroborates the reports that Abū Muslim's forces, led by Qaḥṭaba b. Shabīb and his son, al-Ḥasan b. Qaḥṭaba, had taken control of al-Rayy in 131/748–19. The unusual annulet pattern is not elaborated upon by Zambaur, and needs confirmation with respect to its configura-

[61] See Qur'ān 18:37 for a similar phrase.
[62] See pp. 176-77, above

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

tion on the coin. On the use by Abū Muslim of the title *amīr āl Muḥammad*, "Governor for the family of Muḥammad," which appears on this fals and fals no. 36, see Shaban (above, n. 2), 163–68.

36. (*No mint*), 131; *Abū Muslim*
Obv. field: tawḥid II (see Table 2)
Obv. margin:
قل لا اسئلكم ✦ عليه اجراً ✦ الا المودة ✦ فى القربى ✦
Rev. field:
✦ / محمد / رسول / الله / ✦
Rev. margin:
بسم الله مما امر به ابو مسلم امير آل محمد سنة احدى وثلثين ومئة
ANS (Wood collection; Miles, "Al-Mahdī al-Ḥaqq," p. 334); 2.02 g, 20 mm
ANS (71.224); 2.55 g
ANS (71.316); 2.37 g
Baghdad (R. Guest, "A Coin of Abū Muslim," *JRAS* 1932, pp. 555–56; al-Ḥusaynī, p. 34, n. 12)
Copenhagen (Østrup, no. 176)
Berlin (Nützel, no. 2064)
Private collection of Zambaur (Zambaur, *NZ*, p. 46, no. 7)
Miles, *NHR*, no. 38C

The ornamentation on the reverse field is slightly different on the Berlin specimen. Among the coins included in the present study, the fleur-de-lis ornament appears only in these fulūs and on no. 45. This may possibly provide a clue to the city or region in which this fals was struck (see page 169, below).

37. (*No mint*), 132; *Abū Muslim*
Obv. field: tawḥīd II (see Table 2).
Obv. margin: Q 42:23, 4 × ❀ (see Table 2).
Rev. field: probably as no. 38.
Rev. margin:
بسم الله مما امر به ابو مسلم سنة اثنتين وثلثين ومئة
London (*BMCOriental* 1, p. 191, no. 79)
Cairo (Fahmī, no. 1006); 2.170 g, 20 mm

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The description in the BMC has the obverse and reverse margins reversed. I do not know whether the London or the Cairo description is correct, or whether there are actually two distinct varieties here.

38. (*No mint*), 133; (*Abū Muslim*) *ʿAbd al-Raḥmān b. Muslim*
Obv. field : tawḥīd III (see Table 2).
Obv. margin:
بسم الله امر به الامير عبد الرحمن بن مسلم سنة ثلث وثلثين ومئة
Reverse field: محمد / ●○● / رسول الله
Rev. margin: Q 42:23, 4x ٭ (see Table 2).
Ashmolean Museum (Acq. 1912 BN 1971.183); 2.83 g

39. (*No mint*), 134; (*Abū Muslim*) *ʿAbd al-Raḥmān b. Muslim*
As no. 38, except:
Obv. margin: اربع rather than ثلث
Fraehn, p. 18, no 3

40. (*No mint*), 135; (*Abū Muslim*) *ʿAbd al-Raḥmān b. Muslim*
As no. 38, except:
Obv. margin: خمس rather than ثلث
Fraehn, p. 18, no. 14.
London (unpublished)

41. (*No mint*), 136; (*Abū Muslim*) *ʿAbd al-Raḥmān b. Muslim*
Obv. field: tawḥīd II (see Table 2).
Obv. margin:
مما امر الامير عبد الرحمن بن مسلم سنة ست و ثلثين ومئة
Rev. field: as no. 38.
Rev. margin: as no. 38.
Istanbul (Yapı ve Kredi Bankası collection; *Islamiyetle Paranın Doğuşu ve gelişmesi* [Istanbul, 1971], p. 12, no. 24 — illus. with hand-drawing)

In addition to nos. 37–41 there are several specimens of similar type which are too worn or damaged to allow classification by date. They are: ANS (72.100): 3.56 g; Berlin (Nützel, p. 322, no. 2065); Private collection of Zambaur (*NZ*, p. 47, no. 8); Yale University collection (unpublished).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

42. *Tawwaj*, 132; (*Abū 'l-ʿAbbās*) *ʿAbd Allāh al-Saffāḥ*

Obv. field: سنة اثنين / وثلثين / ومئة

Obv. margin: بسم الله مما امر به عبد [الله ا]ميرالمؤمنين بتوج

Rev. field: محمد / رسول / الله

Rev. margin: قل لا اسئلكم عليه اجراً الا المودة فى القربى

Illegible counterstamp (or dent?) on reverse.

ANS (59.130; Miles, *Persepolis*, no. 504); 1.34 g, 20 mm.

This fals is discussed by Miles, *Persepolis*, pp. 66–68. It is the only known coin which bears the name of the first ʿAbbāsid caliph together with the slogan Qur'ān 42:23. Since (Abū 'l-ʿAbbās) ʿAbd Allāh (al-Saffāḥ) is given the title *amīr al-mu'minīn*, "Commander of the Faithful," this fals must have been struck after 13 Rabīʿ I/30 October 749, on which day al-Saffāḥ received the pledge of allegiance. The retention of the revolutionary slogan on a post-revolutionary ʿAbbāsid coin is puzzling. The official ʿAbbāsid coinage would have been sloganless, as were the dirhams of al-Kūfa, 132, for example, in order to demonstrate that the revolution was over, and that the right people had won and were in power. A possible explanation for this coin is that it is an unofficial, unauthorized "ʿAbbāsid" coin struck not by authorized agents of the ʿAbbāsid family (despite the stereotyped expression "authorized by . . . "), but by a local chief who wished to commemorate the event of al-Saffāḥ's accession to the caliphate. Another possibility is that a new official obverse (or reverse?) die, bearing ʿAbd Allāh's name, title, and the place and year, was mistakenly combined with an old reverse die, bearing Qur'ān 42:23. Miles considered the side bearing *Muḥammad rasūl Allāh* and Qur'ān 42:23 as the obverse. Since in none of the other fulūs in this study is the side carrying *Muḥammad rasūl Allāh* considered the obverse, it is here for the sake of convenience considered the reverse on this coin also.[63]

43. *Bukhārā*, 1xx

Obv. field: tawḥīd II (see Table 2).

Obv. margin: بسم الله ضرب ببخارى فى سنة .... ثمن ومئة

[63] See J. Bacharach and H. A. Awad, "The Problem of the Obverse and the Reverse in Islamic Numismatics," *NC* 1973, pp. 183ff.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Rev. field: محمد / رسول الله

Rev. margin: very worn, but probably Q 42:23, 4× ∴ (see Table 2).

London (*BMCOriental* 1, p. 191, no. 80).

The slogan Qur'ān 42:23 divided by four pyramids of triple annulets inclines us to associate this coin with Abū Muslim (see Table 2). However, there is no way of knowing precisely when this coin was struck. Abū Muslim and and his lieutenants were in control of Khūrāsān and Transoxiana, including Bukhārā, for several years following the installation of the ʿAbbāsid caliphs, although rebellions occasionally broke out against his authority. In 133/750–51 a Shi'i, a certain Shurayk (Sharīk ?) b. Shaykh al-Mahrī, revolted against Abū Muslim in Bukhārā. The latter sent Ziyād b. Ṣāliḥ al-Khuzāʿī against him, and he killed Shurayk.[64] In 133 also, Abū Dāwūd Khālid b. Ibrāhīm (see fals no. 46), one of Abū Muslim's lieutenants, conducted a raiding expedition in Transoxiana.[65] In 134 Khālid b. Ibrāhīm conducted another campaign in Transoxiana.[66] Abū Muslim himself was in Samarqand and Bukhārā in that year, apparently taking part in the expedition.[67] Abū Muslim appointed Ziyād b. Ṣāliḥ governor over Bukhārā in 134/751–52.[68]

44. *Shīrāz*, 130

Obv. field: لا اله الا / الله وحده / لا شريك له

Obv. triple beaded border, uncertain number of marginal annulets.

Rev. field: ∴ / محمد / رسول / الله

Rev. margin: بسم الله ضرب بشيراز سنة ثلثين ومئة

Miles, *Persepolis* no. 193.

There is no specific information that Shīrāz was controlled by revolutionaries in the year 130/747–48. Muḥārib b. Mūsā, who pledged allegiance to ʿAbd Allāh b. Muʿāwiya, conquered Shīrāz in 128/745–46; it is possible that someone loyal to him or to Ibn Muʿāwiya was still in control of Shīrāz for part of 130, and issued this fals. The ornament above the reverse field legend, the pyramid of three points, may be an

[64] al-Ṭabarī, 3, p. 74. Compare R. Frye, *Bukhārā* (Norman, Okla., 1965), pp. 20ff.
[65] al-Ṭabarī, 3, p. 74.
[66] al-Ṭabarī, 3, pp. 79f.
[67] al-Ṭabarī, 3, p. 80.
[68] al-Ṭabarī, 3, p. 80.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

indication that someone associated with Abū Muslim, or an individual of Yamani sympathies, was in control of the city in 130/747–48 (see pages 171-72, above).

45. (*No mint*), 133; *Zuhayr b. al-Turkī*

As no. 34, except:

Rev. margin: بسم الله مما امر به الامير زهير بن التركى سنة ثلث وثلثين ومئة

*ANS (65.143; compare Miles, "Al-Mahdī al-Ḥaqq," p. 333, n. 3); 3.44 g

The fleur-de-lis ornament in the reverse margin is at twelve o'clock. A certain Zuhayr b. al-Turkī was governor of Hamadhān in 137/754–55.[69] Perhaps he was governor there, or elsewhere in al-Jibāl, in 133/750–51 also. In 133 Abū Muslim was officially governor over both Khurāsān and al-Jibāl, which includes Hamadhān.[70] Zuhayr b. al-Turkī may have been one of Abū Muslim's lieutenants, although he struck fulūs in his own name. On the basis of similarities in ornamentation and legend configuration between this fals and Abū Muslim's of 131 the tentative suggestion may be made that both coins may have been struck in Hamadhān or some other locality in al-Jibāl.

46. (*No mint*), 138; *Khālid b. Ibrāhīm*

Obv. field: tawhid II (see Table 2).

Obv. margin:

بسم .... مر به الامير خالد بن ابر ..... سنة ثمان وثلثين ومئة

Rev. field: ∴ / محمد / رسول / الله / ∴

Rev. margin: Q 42:23, 4 × ∴

Fraehn, p. 19, no. 10.

This is the only known coin *not* struck by authority of Abū Muslim on which the slogan Qur'ān 42:23 is divided by four pyramids of three points or annulets (compare fals no. 45). Abū Dāwūd Khālid b. Ibrāhīm was Abū Muslim's lieutenant.[71] He was appointed governor over Khu-

[69] al-Ṭabarī, 3, p. 118.

[70] al-Ṭabarī, 3, p. 75.

[71] al-Ṭabarī, 3, p. 94. See p. 195 above.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

rāsān by the Caliph Abū Jaʿfar al-Manṣūr after the death of Abū Muslim in 137/754–55.[72] He was killed in 140/757–58 when, according to a report, he fell off a wall and broke his back during an army revolt against him.[73]

47. *Sijistān*, 136; *ʿImrān b. Ismāʿīl*

Obv. field: ستين / بدرهم

Obv. margin: هذا ما امر به ٭٭ الامير عمران ٭٭ بن اسماعيل ٭٭

Rev. field: جائز / بدانق

Rev. margin: ضرب هذا الفلس بسجستان سنة ست وثلثين ومئة

London (Walker, "New Coin Evidence from Sīstān," *JRAS* 1935, pp. 115–21). (2 specimens)

Abū 'l-Najm ʿImrān b. Ismāʿīl al-Ṭā'ī was a leader of the pro-ʿAbbāsid movement in Khurāsān, and was the father-in-law of Abū Muslim.[74] According to the literary sources, he was sent by Abū Muslim as governor over Sijistān, but the precise year is nowhere indicated. Khalīfa b. Khayyāṭ, whose lists of governors are among the most complete in comparison with those in other early Arabic histories, was unsure of the exact year. He lists him among the governors over Sijistān during the reigns of both the last Umayyad caliph, Marwān II (127–32/744–50), and the first ʿAbbāsid caliph, Abū 'l-ʿAbbās al-Saffāḥ (132–36/750–54).[75]

In commenting on the use of the triple-annulet pyramid symbol on these coins of ʿImrān b. Ismāʿīl, Walker noted the association of that symbol with the coinage of Abū Muslim, under whom the issuer of these fulūs served as deputy.

The unusual field legends, which apparently give currency equivalents, are discussed in detail by Walker (pp. 119–21).

[72] al-Ṭabarī, 3, p. 119.

[73] al-Ṭabarī, 3, p. 128.

[74] On Abū 'l-Najm ʿImrān b. Ismāʿīl, see J. Walker, "New Coin Evidence from Sīstān," *JRAS* 1935, pp. 117–19. See also Wellhausen (above, n. 29), 509 and 520; C. Bosworth, *Sīstān Under the Arabs* (Rome, 1968), pp. 80 and 125. His name appears as "Abū 'l-Najm ʿAmmār" in the *Taʾrīkh-Sīstān* (cited by Bosworth, p. 80), as "Ismāʿīl b. ʿImrān" in Khalīfa, p. 617, and "Ismāʿīl b. ʿAmr" in Khalīfa, p. 632.

[75] Khalīfa, pp. 617 and 632.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

ABBREVIATIONS

Allan—J. Allan, "Unpublished Coins of the Caliphate," *NC* 1919, pp. 194–98.

Artuk, *Denizbaci*—I. Artuk, *Denizbaci Definesi*, Ankara, 1966.

Artuk, *Kataloğu* — I. Artuk and C. Artuk, *Istanbul arkeoloji müzeleri teskirdeki islâmî sikkeler kataloğu*, 1, Istanbul, 1970.

B. and N. — M. D. al-Bakrī and N. M. Naqshabandī, *al-Dirham al-umawī al-muʿarrab*, Baghdad, 1974.

al-Bakrī (1968)—M. D. al-Bakrī, "Shiʿār al-daʿwa al-ʿabbāsiya ʿalā al-nuqūd al-maḍrūba fī Īrān," *Sumer* 24 (Baghdad, 1968), pp. 119-25.

al-Bakrī (1970)—M. D. al-Bakrī, "Nawādir al-maskūkāt fī 'l-matḥaf al-ʿirāqī," *Sumer* 26 (Baghdad, 1970), pp. 329–37.

Codrington—O. Codrington, "Some Rare Oriental Coins," *NC* 1902, p. 267.

Fahmī—A. Fahmī, *Mawsuʿāt an-nuqūd al-ʿarabiya wa-ʿilm an-nummiyāt*, 1: *Fajr al-Sikka al-ʿarabiyya*, Cairo, 1965.

Fraehn—C. Fraehn, *Recensio numorum Muhammedanorum Academiae Imp. scient.*, St. Petersburg, 1826.

Ghalib—I. Ghalib, *Maskūkāt-i qadimeh-yi islamiyyah qataloghu*, Istanbul, 1894.

al-Ḥusaynī—M. B. al-Ḥusaynī, "Shiʿār al-khawārij ʿalā 'l-nuqūd al-islāmiyya al-maḍrūba bi-'l-Kūfa," *al-Maskūkāt*, vol. 1, no. 2 (Baghdad, 1969).

Khalīfa—Khalīfa b. Khayyāṭ, *al-Taʾrīkh*, ed. S. Zakkār, Damascus, 1967.

Markov—A. Markov, *Inventarnyi katalog musulmanskukh monet*, St. Petersburg, 1896.

Miles, "Al-Mahdī al-Ḥaqq"—G. C. Miles, "Al-Mahdī al-Ḥaqq, Amīr al-Mu'minīn," *RN* 1965, pp. 329–41.

Miles, *NHR*—G. C. Miles, *The Numismatic History of Rayy*, ANSNS 2 New York, 1938.

Miles, *Persepolis*—G. C. Miles, *Excavation Coins from the Persepolis Region*, ANSNNM 143, New York, 1959.

Miles, *RIC*—G. C. Miles, *Rare Islamic Coins*, ANSNNM 118, New York, 1950.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

al-Naqshabandī—N. M. al-Naqshabandī, "al-Dirham al-umawī al-maḍrūb ʿalā 'l-ṭirāz al-islāmī al-khāṣṣ," *Sumer* 15 (Baghdad, 1959), pp. 53-73.

Nützel—H. Nützel, *Katalog der orientalischen Münzen*, 1, Berlin, 1898.

Østrup—J. Østrup, *Catalogue des monnaies arabes et turques du musée nationale de Copenhague*, Copenhagen, 1938.

Rotter—G. Rotter, "The Umayyad Fulūs of Moṣul," *ANSMN* 19 (1974), pp. 165–98.

Scherzl—P. Scherzl, *Opisanie medalei i monet . . . kharkowskago Universiteta*, 3, Kharkow, 1912.

Sourdel—D. Sourdel, *Inventaire des monnaies musulmanes anciennes du musée de Caboul*, Damascus, 1953.

al-Ṭabarī 2 (3)—al-Ṭabarī, *Taʾrīkh al-rusul wa-l-mulūk*, vol. 2 (vol. 3) ed. M. J. De Goeje, et al., Leiden, 1879-1901.

Zambaur, *Münzprägungen*—E. von Zambaur, *Die Münzprägungen des Islams*, Wiesbaden, 1968.

Zambaur, *NZ*—E. von Zambaur, "Contributions à la numismatique Orientale, I," *NZ* 36 (1904), pp. 45–47.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

NEW INFORMATION ABOUT THE SCREW PRESS AS A DEVICE FOR MINTING COINS: BRAMANTE, CELLINI AND BALDASSARE PERUZZI

(PLATE 38)

NICHOLAS ADAMS

Two Italian artists are generally associated with the development of the screw press as a device for minting coins, the architect Donato Bramante (1444–1514) and the sculptor Benvenuto Cellini (1500–71).[1] I wish to add a third name to this period of early experimentation with the screw press, the Sienese artist-architect Baldassare Peruzzi (1481–1536), and to offer what I believe is the earliest representation of the screw press.[2]

The actual invention of the screw press is credited to Bramante. The evidence is flimsy, a single line from Giorgio Vasari's *Life of Bramante*, but it is quite explicit:

> Per il che meritò dal detto papa, che sommamente lo amava per le sue qualità, di essere fatto degno dell'ufficio del Piombo, nel quale fece uno edificio da improntar le bolle con una vite molto bella.[3]

The press was probably used for attaching papal seals to important documents and it was, in all likelihood, relatively small. If Vasari is

[1] G. F. Hill, *Medals of the Renaissance* (Oxford, 1920), pp. 26–28; A. P. Usher, "Machines and Mechanisms," in *A History of Technology*, 3, ed. C. Singer, E. J. Holmyard, A. R. Hall, T. Williams (Oxford, 1957), pp. 338–39.

[2] This article is excerpted from my Ph.D. dissertation, "Baldassare Peruzzi: Architect to the Republic of Siena 1527–1535" (New York University — Institute of Fine Arts, 1977). I am particularly indebted to Kathleen Weil-Garris (New York University) and Wolfgang Lotz (Biblioteca Herziana) for their help in the preparation of my dissertation. Aldo Cairola of the Museo del Comune (Siena) helped me with the interpretation of documents concerning the Sienese mint. Sonia Fineschi of the Archivio di Stato (Siena) helped with the transcription of the Sienese documents.

[3] G. Vasari, *Le Opere di Giorgio Vasari*, 4, ed. G. Milanesi (Florence, 1879), p. 159.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

correct in his attribution of the screw press to Bramante at that time, then the invention probably dates from 1506 or 1507.[4]

The first mint master who we know certainly made use of the screw press was Benvenuto Cellini. He describes it in his *Trattato dell'Oreficeria* of 1568.[5] But his use of the screw press is from 40 years earlier.

> . . . con questa forza sopradetta io stampai più di cento medaglie di quelle ch'io feci a papa Clemente.[6]

This probably dates Cellini's use of the screw press to ca. 1529 when he was appointed *maestro delle stampe* by Clement VII.[7]

Cellini's description centers on the mechanical operation of the screw press. He shows how the dies, trussel and pile are related and how the head of the screw must be pierced so that a staff may be inserted to create a kind of capstan from the screw. Cellini is quite convinced about the advantages of the screw press. Although costly to build he notes that the dies do not wear out so easily as those of the hammer press and that furthermore it is speedier than the hammer press: twenty medals may be minted with the screw press to every one that is done with the hammer. However, despite his careful description of the moving parts of the screw press we have no clear idea of the appearance of these early screw presses.[8]

Like many artists and architects during the Renaissance, Baldassare Peruzzi understood the principles of minting.[9] His involvement with

[4] O. H. Förster, *Bramante* (Munich, 1956), p. 203.

[5] B. Cellini, *Due Trattati: uno intorno alle otto principali arti dell'oreficeria, l'altro in materia dell'Arte della Scultura dove si veggono infiniti segreti nel lavorar le figure di marmo, et nel gettarle in bronzo* (Florence, 1568). Quotations are taken from the modern edition, see B. Cellini, *Opere*, ed. G. G. Ferrero (Turin, 1971).

[6] Cellini, *Opere* (above, n. 5), pp. 713–14. (chap. 17: Altro Modo da Stampare medaglie con la vite).

[7] Cellini, *Opere* (above, n. 5), pp. 170–72; *La Vita*: 1.45.

[8] For a translation of Cellini's chapter on the screw press and an interpretative drawing after his description, see Usher (above, n. 1), p. 339.

[9] Among the best known are Pisanello, Michelozzo and Leonardo da Vinci. See H. M. Caplow, "Sculptors' Partnerships in Renaissance Florence," *Studies in the Renaissance*, 21 (1974), pp. 145–75; M. Cooper, *The Inventions of Leonardo da Vinci* (New York, 1971), pp. 88–89; J. P. Richter, *The Literary Works of Leonardo da Vinci*, 2 (London, 1939), pp. 11–12.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the Sienese mint, a part of local historical literature, has recently been confirmed with the discovery of new documents and by the identification of a drawing in his hand.[10]

In 1527 Peruzzi was appointed architect to the Republic of Siena, a position he held until 1535. His major task was the construction of a series of bastions for the old walls of Siena, but he was also asked to do other kinds of miscellaneous work. Among the projects we know of are the refurbishment of a house for the Florentine ambassador in Siena, two surveying trips to the Maremma near Siena, the reconstruction of a dam near Grosseto and the decoration of the city of Siena in expectation of a ceremonial visit from the Holy Roman Emperor, Charles V. Interestingly, it was the cost of the bastions plus the cost of the decorations for Charles's entry that lead ultimately to Peruzzi's minting activity.[11]

Toward the end of 1529 the city found the financial burden of the bastions and the preparation for Charles's arrival too great; work was suspended on the fortifications and a new issue of currency was planned to pay for the projects.[12] It seems that Peruzzi, as a previously unpublished document states, offered his services as mint master in order to help improve the financial state of the Republic. A note in the archive of the Concistoro from the Archivio di Stato in Siena tells us that new currency was about to be issued and that Peruzzi was ready to help.

> Advertendo le Signorie Vostre che gia s'è trovato modo di battare a ottima lega con quasi il medesimo guadagno per vostra Republica. Et del modo ne saranno informate a pieno le Signorie Vostre dalo escellentissimo maestro Baldassare vostro.[13]

[10] See A. Bardi, "Storie Senese 1512–1555," MS. A.VI.51, fol. 42 verso, Biblioteca Comunale, Siena.

[11] Ironically Charles never made the trip to Siena while Peruzzi was alive. He finally came to Siena in 1536. During 1530 he was occupied with the siege of Florence.

[12] See Adams (above, n. 2), pp. 32–33. Decisions to suspend work on the fortifications were taken 10 December 1529, 21 January 1530, 7 March 1530.

[13] Concistoro (Scritture) 2206, Notula dei precessori, Archivio di Stato, Siena. See Adams (above, n. 2), app. 3, document 248.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

The note is not explicit about the nature of Peruzzi's plans for Sienese coinage. It says merely that Peruzzi can make coins of an excellent alloy at the same profit as before.

Two interpretations of this document are possible. It is conceivable that what Peruzzi wished to tell the government was that he had discovered a new and better alloy of metals for the Sienese coins. Mint masters were perpetually on the lookout for new alloys that would use less precious metal but that would still retain the look, weight and feel of more precious metal.[14] From what we know of Peruzzi's activities in this period it is possible that he had experience in the field of metallurgy. He was, for example, a friend and compatriot of the author of the *Pirotechnia*, Vanoccio Biringucci, and at one point during his tenure as architect to the Republic of Siena he was asked to inspect an iron works near Siena.[15] Peruzzi's opinions in these matters were obviously much valued.

But Peruzzi may also have proposed to introduce the screw press into the Sienese mint. As Cellini points out, the screw press saves money and this could have allowed Peruzzi to propose the use of a richer alloy of metal. In support of this second hypothesis, I wish to offer a hitherto unnoticed drawing in the hand of Peruzzi from the Gabinetto dei Disegni of the Uffizi Gallery in Florence.[16]

In the center of the sheet (Plate 38,1) there is a drawing of a screw press. The screw mechanism is inserted through a circular neck which is joined to an H-shaped block. Imbedded in the horizontal cross-piece, which forms an arch on its lower face, is a circular depression where pile and blank rest. In the upper left of the sheet there is a variant form of the

[14] A. Cairola, *Il Libro delle Monete* (Bologna, 1974), p. 26.

[15] Biringucci describes a remarkable piece of antique glass that he has seen, and adds " . . . et pochi giorni sono che da maestro Baldassare da Siena architetto ottimo me ne fu mostrò un'altro pezzo simigliantemente pur antico che v'era un fregio de una lamaca partita con vari colori, uno lavor sutililissimo in campo laticinio tutto di smalti ripieno, cosa che mostrava oltra alla bellezza quasi une impossibilita a l'arte." V. Biringuccio, *Il Diece Libri della Pirotechnia* (Venice, 1540), bk. 2, chap. 13, 43 verso. Concerning the iron works, see Adams (above, n. 2), p. 17 and app. 3, document 57.

[16] Uffizi Architettura (UA) 504 verso, Gabinetto dei Disegni, Uffizi Gallery, Florence. Photograph courtesy Gabinetto Fotografico, Sopr. Gallerie, Florence.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

screw with a pierced square head for the insertion of a staff, like Cellini's description, which would be used to rotate the screw and lift the trussel.

Both sketches are executed rather roughly and certain sections are difficult to interpret. For example, on the center drawing it is unclear whether the press overlaps the vertical sections of the base and in neither sketch is the relation of dies, blank and press clarified sufficiently to make it possible to compare them in detail to Cellini's description.

Although there are a large number of measures around the sketch there is no indication of scale. It is probable, however, that Peruzzi was using a scale of *soldi*, a relatively common Sienese measurement. One *soldo* equals about 3 centimeters.[17] This would mean that the height of the legs would have been about 50 cm and overall the press would have stood 1.5 meters or a little less. This height would accord well with the later types of screw press used well into the ninteeenth century.[18]

The dating of this drawing is a difficult, but not an insurmountable task.[19] Although the hand is certainly Peruzzi's, it is not so revealing as to offer a date. But the hypothesis that it dates around 1530 is strongly supported by the style of the drawing on the other side of the sheet (Plate 38,2).[20] Here we see a hand that is much more characteristic of Peruzzi. The drawing shows a reconstruction proposal for the church of S. Agostino in Monte San Savino near Siena. We may compare this

[17] For modern equivalents of mediaeval weights and measures, see J. H. Alexander, *Universal Dictionary of Weights and Measures Ancient and Modern, Reduced to the Standards of the United States of America* (Baltimore, 1850). I have converted to metric.

[18] See examples in the Museum of Science and Technology, Washington, D.C. or the illustration from the *Encyclopédie* of Diderot d'Alembert (1751–72), see Von Tyll Kroha, *Münzen Sammeln*, Bibliothek für Kunst- und Antiquitätenfreunde, 13 (Braunschweig, 1976), p. 10.

[19] The dating of architectural and mechanical drawings is not an easy task. Much depends on determining the intention of the draughtsman. Was the drawing for presentation to a client? A working drawing? An idea? It is rarely possible to find drawings at the same graphic stage for comparison. There is no published catalogue of Peruzzi's architectural drawings, though I have catalogued 19 of Peruzzi's drawings that relate to his career as architect to the Republic of Siena (Adams [above, n. 2], pp. 179–228). A catalogue of figural drawings and paintings has been published by C. L. Frommel, *Baldassare Peruzzi als maler und zeichner* (Vienna, 1967).

[20] Uffizi Architettura (UA) 504 recto. Gabinetto dei Disegni, Uffizi Gallery, Florence. Photograph courtesy of Gabinetto Fotografico, Sopr. Gallerie, Florence.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

sketch with drawings that Peruzzi did for reconstruction of the church of S. Domenico, Siena and which are dated 1532.[21] The script on the Monte San Savino drawing is of the same flowing, yet precise type as the securely dated S. Domenico sketches.[22] Furthermore the style of reconstruction drawing, with brown wash for the walls and thin spidery lines for the vault is present in both Monte San Savino and S. Domenico. Thus graphic evidence lends its weight to the circumstantial evidence for dating the drawing ca. 1530.

How did Peruzzi come to know of the screw press? As a student of Bramante in Rome he must have seen the device and like Cellini he was probably impressed by its efficiency.[23] With the shortage of currency in Siena, remembering the success of Bramante's minting machine and its screw mechanism, it is likely that Peruzzi drew up a similar machine for the Sienese. However, it is doubtful that it was ever built. Perhaps the cost of the machine, something Cellini mentions, or the time needed for its construction detered the Sienese. No further documents connect Peruzzi with the Sienese mint and even Peruzzi's friend Biringucci is silent about the screw press in a passage on minting in his *Pirotechnia*.[24] Nonetheless, Peruzzi's knowledge of the screw press ca. 1530 can not be denied and drawing and document support the theory that the screw press was well diffused in Italy before it became common in Germany and France ca. 1550.[25]

[21] For a discussion of these drawings, see G. Chierici, "Baldassare Peruzzi e la chiesa di S. Domenico a Siena," *Rassegna d'Arte Senese*, 16 (1933), pp. 70–74. See also, H. Wurm, *Der Palazzo Massimo alle Colonne* (Berlin, 1965).

[22] See in particular UA 338.

[23] On Peruzzi's early years, see L. H. Heydenreich and W. Lotz, *Architecture in Italy 1400–1600* (Harmondsworth, 1974), p. 149.

[24] Biringucci (above, n. 15), bk. 9, chap. 3.

[25] Usher (above, n. 1), p. 344. Usher cites the adoption of the screw press in France in 1548 and purchase of screw presses from Max Schwab in Augsburg for the *Cours des Monnaies* of 1552 in support of this statement.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

THE ESSAI QUARTER-FLORIN OF BRABANT, 1600

(PLATE 39)

J. D. BRADY

Four months before his death in 1598, Philip II of Spain settled the inheritance of the Netherlands and the Franche Comté on his daughter Isabella (Elizabeth) and her cousin and intended husband, Albert, who were to reign jointly as archdukes. The couple duely arrived in the Netherlands in September 1599 and a month later established a new currency system based on the silver florin. This in turn was replaced in 1603 by the silver real system.

The standard catalogue of the series was published by Enno van Gelder and Marcel Hoc in 1960, and dates the first quarter-florin to 1601. The supplement of 1964 adds the following note: "Il existe un essai de 1600 à type différant . . . ."[1] A silver piece (3.381 g) corresponding to the new description is in the collection of the Hispanic Society of America, now on deposit with the American Numismatic Society. Since Enno van Gelder worked through this part of the cabinet in 1962 and indeed commissioned a photograph of the piece, one must conclude that his note in the supplement, though not illustrated, was based on this same piece. Van Gelder also noted on the coin box that the type had been illustrated by Heiss; and reference to that work shows that Heiss worked from a placard published in 1620 at Antwerp.[2]

The rarity of the piece and the substance of van Gelder's discovery warrant fuller publication of the coin, with full credit to the finder. (This should not, incidentally, be confused with the slightly different

[1] H. Enno van Gelder and M. Hoc, *Les Monnaies des Pays-Bas bourguignons et espagnols, 1434-1713* (Amsterdam, 1960) and *Supplement* (Amsterdam, 1964). My narrative is based on pp. 146–48 of the original edition. The pertinent part of the catalogue is pp. 152–54, and p. 7 of the supplement (no. 289–1).

[2] A. Heiss, *Descripción general de las monedas hispano-cristianas desde la invasión de los árabes*, 3 (Saragossa, 1962), p. 162 and pl. 187, 14.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

type dated 1601, for which De Witte provided the standard catalogue entry in 1899, and a notice of the surviving punch in 1912.[3])

New work in the series has turned up additional material of interest. Albert and Isabella are represented not only in their coinage but also in a large series of jetons catalogued by Dugniolle in 1876–80.[4] In this series a common obverse type is of the facing busts of the archdukes. In the 42 examples which I have seen, ranging from 1599 through 1618, there is notable variety in the punches used for the obverse type: but in the series dated 1607–9 (Dugniolle's nos. 3622, 3631 and 3647) there appears the same bust punch that was used in the essai quarter-florin of 1600. From this observation all sorts of questions arise.

Clearly it would be unreasonable to impugn the whole series of jetons as dated too early. On the other hand the placard of 1620 illustrating the quarter-florin establishes some degree of bona fides for the silver piece. The residual alternatives to explain the use of a single punch in pieces separated by seven years (while other punches were used in the interval) are first that the punch was indeed made in 1600 and put aside until it was reused in 1607–9; and second that the punch was made in 1607 and used then or later to fabricate an obsolete denomination.

Close inspection shows progressive wear in the punch. In its first state the punch is unimpaired (quarter-florin, Plate 39,1; jeton, Dugniolle nos. 3622, 1607, first example, Plate 39,2). In its second state a minute spot appears in the front line under Albert's collar, and this continues through the rest of the series (Dugniolle nos. 3622, 1607, second example, Plate 39,3). In the third state of the punch the front part of Isabella's collar disappears from underneath the ruff (Dugniolle nos. 3631, 1608, Plate 39,4, and 3647, 1609, Plate 39,5).

Accordingly there can be no question that the die for the silver essai was punched no later than the first part of 1607. The epigraphy of

[3] A. De Witte, *Histoire monétaire des comtes de Louvain, ducs de Brabant et marquis du Saint Empire Romain*, 3 (Antwerp, 1899), p. 77 and pl. 61, 946 (= Van Gelder and Hoc [above, n. 1], p. 153, no. *289–2); *Catalogue des poinçons et matrices du Musée de l'Hôtel des Monnaies de Bruxelles* (Brussels, 1912), p. 3, no. 1.

[4] J.-F. Dugniolle, *Le Jeton historique des dix-sept provinces des Pays-Bas*, 3 (Brussels, 1877).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

the essai and the jetons is of a single style, notably larger than in the jetons of 1600–2. In the two examples of the first state it is possible that a common letter punch appears as well, the E with a broad and clubbed serif on the lower right arm (in silver at "Elisab*e*t," and in copper at "d*e*i"). Otherwise there is a systematic difference between the silver, where the letters are clean and open, and all the copper, where they are rougher and tend to be occluded. From this one can argue for the absolute priority of the silver over the copper of 1607 and later years, but whether the silver quarter-florin is to be dated absolutely to 1600 is open to serious doubt.

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

TWO ADDITIONS TO THE WORKS OF KARL GOETZ

(PLATE 40)

J. D. BRADY

Gunther Kienast in the introduction to his magisterial catalogue of the medallic work of Karl Goetz writes disarmingly that "All of us who study Karl Goetz and his medals are sadly handicapped by a shortage of information."[1] Two medals in the collection of the American Numismatic Society are now offered as a supplement to Kienast's work. Both are cast in bronze, 80 mm, with a dark gold patination. The first (Plate 40,1) shows a female figure at the right, apparently floating in air, with a scanty veil extending from her left hand up around her shoulders and back down to her knees. In her extended right hand is a branch of olive leaves and berries. Below the branch is the inscription "National-/flug-spende" (National Aerial Appropriation). An eagle swoops down from above to the left. The reverse shows a seaplane rising to the right from the waves, and a balloon at the upper left. A cartouche in the exergue is inscribed "Fuer verdienstvolle / Leistungen" (For Meritorious Achievements). Both sides have a beaded border. The piece is unsigned.

The second (Plate 40,2) has a similar obverse, but with an airplane to the left instead of the inscription. By the tail of the plane is the signature "K. Goetz." The reverse has the large inscription "National– / flugspende" above an eagle displayed on a perch. On either side of the perch are the figures 19/14, apparently engraved after the medal was cast. Both sides have a plain raised edge. Each of the medals was presented to the American Numismatic Society by Wayte Raymond in 1934.

The medals are not illustrated in Kienast but seem to correspond to the following entries:

[1] G. W. Kienast, *The Medals of Karl Goetz* (Cleveland, 1967), p. ii.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Opus 55. Seaplane medal of 1914, description of which is not available. Cast 70 mm. Opus 56. National Aviation medal to commemorate the donation to further the national aviation in 1914. Description not available. Cast. 70 mm.[2]

Once recognized, the medals have an interesting position in Goetz's work, since the obverse type was eventually developed into the dark bronze medal, 85 mm, issued to commemorate the "ace" Oswald Boelcke who was credited with downing 40 airplanes before his own death on 28 October 1916 (Plate 40,3).[3]

[2] Kienast (above, n. 1), p. 56.

[3] Kienast (above, n. 1), opus 183, p. 69; the 36 mm die-struck version is illustrated on p. 160.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

GUIDE FOR CONTRIBUTORS AND LIST OF ABBREVIATIONS

MANUSCRIPT PREPARATION

All typescripts are to be double spaced with ample margins. Footnotes are to be sequentially numbered, typed double spaced, on separate sheets following the text. All citations should be verified by the author before the article is submitted and the author should retain an up-to-date copy of the submitted manuscript. The author supplies the required photographs, original drawings, graphs, monograms, etc. (for ANS collections a photography order may be submitted with the manuscript). In most instances, the author will be requested to paste up the accompanying photographic plates, if any.

An abstract of the article accepted for publication must also be submitted by the author for inclusion in *Numismatic Literature.*

Authors are accorded the opportunity to read galley proof. For this reason authors are requested to inform the Editor of any plans for extended travel during the relevant period.

This guide deals primarily with the citation of references. The guiding principle is clarity: citations should enable the interested reader to locate the source easily. For other matters of style, the editors rely on the University of Chicago, *A Manual of Style,* 12th edition.

FOOTNOTE CITATION

Footnotes should be kept to the necessary minimum. Each new source not included in the List of Abbreviations below should be cited in full; subsequent references to the same work are cited in the *short form.* To be complete, citations must include the following information:

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

For books:

Author's initial(s), last name
Complete title
Vol. no., if any
Editor, compiler or translator, if any
Name of series, vol. no, series no. if any
Edition, if other than the first
City, year of publication
Page no(s)., etc.

For journal articles:

Author's initial(s), last name
Title of article
Name of journal
Series, vol. no, issue no., if any
Year of issue
Page no(s)., etc

For unpublished material include the title of document (if any) and date; folio number; name of collection; depository and location (city).

Short form: Author's last name (above, n. 00), p. 129.

[Reference is to the original citation.]

Use of the *short form* replaces "loc. cit.," "op. cit.," "ibid.," and "idem." For clarity "see also" or "compare" is preferred to the sometimes confusing "cf." Avoid, as well, use of "f.," "ff." and "passim" in page citations.

When an article includes a catalogue, the author should consider inserting a "Key to Abbreviations" at the beginning of the section when the catalogue might otherwise be encumbered by lengthy bibliographical citations.

Use of roman numerals is limited to references to pages so numbered (in lower case) and to denote volumes in the collections of inscriptions, such as *IG* and *CIL*. In all other instances, regardless of the form appearing in the work cited, arabic numerals are to be used.

BOOKS

Works not included in the appended List of Abbreviations should be cited as in the examples that follow. If cited frequently, the first reference to a lengthy title may include the note "Hereafter cited as . . ." When a reprint edition must be used, it is the original work which is cited. Titles in Arabic, Cyrillic, Greek or Hebrew characters are transliterated. Capitalization of foreign titles follows the rules of capitalization for normal prose in that language. Foreign titles, other than in the Romance languages and German, may be translated in brackets. Pub-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

lishers are omitted, place of publication is given in conventional English form including the country or state if there is possible confusion (Cambridge, Mass., or Cambridge, Engl.).

Simplest form

R. A. G. Carson, *Coins* (London, 1962), pp. 170–72.

Later editions, translations, edited works

C. Seltman, *Greek Coins*, 2nd ed. (London, 1955), p. 19.

M. Bloch, *Land and Work in Mediaeval Europe*, trans. J. E. Anderson (London, 1967), p. 125.

E. P. Newman and R. G. Doty, eds., *Studies on Money in Early America* (New York, 1976).

R. Kiernowski, *Pradzieje grasza* [The early history of the groat] (Warsaw, 1975), pp. 280–97.

Multiple volumes

D. B. Waage, *Antioch-on-the-Orontes*, vol. 4, pt. 2: *Greek, Roman, Byzantine and Crusaders' Coins* (Princeton, 1952), p. 97.

G. E. Bates, *Sardis*, mono 1: *Byzantine Coins* (Cambridge, Mass., 1971), p. 129, no. 1150. [Note use of "mono." to distinguish this series from the Excavation Reports]

J. F. Loubat, *The Medallic History of the United States of America, 1776–1825*, 1 (New York, 1878), pp. 29–36.

The Papers of Alexander Hamilton, 6, ed. H. Syrett (New York, 1962), pl. 539.

Part of series

H. A. Cahn, *Knidos*, AMUGS 4 (Berlin, 1970), p. 190.

P. Balog, *Umayyad, ʿĀbbāsid and Ṭūlūnid Glass Weights and Vessal Stamps*, ANSNS 13 (New York, 1976), p. 28.

Reference works

DAB, s.v. "Washington, George" (Fitzpatrick).

*EI*², s.v. "Aflāṭūn" (Walzer).

RE 22, s. v. "Praeneste," cols. 1550–51 (Redke).

CAH 10, p. 702, n. 1 (Momiglimo).

Primary sources

August., *De Civ. D.* 20.2

Plut., *Sull.* 34.4

The ancient primary sources are abbreviated according to *The Oxford Classical Dictionary*, 2nd ed.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

JOURNALS

Journals are cited according to the list of Periodical Abbreviations which appears in *NL*. *Numismatic* journals published annually are cited with the year only; journals having volumes whose parts are sequentially numbered are cited by volume and date only. Journals not included in the *NL* list are cited in full including place of publication.

B. V. Head, "On the Chronological Sequence of the Coinage of Ephesus," *NC* 1880, pp. 106–7, n. 3.

D. J. MacDonald, "Aphrodisias and Currency in the East, A.D. 259–305," *AJA* 78 (1974), pp. 279–86.

G. K. Jenkins, "An Early Ptolemaic Hoard from Phacous," *ANSMN* 9 (1960), pp. 17–37, esp. pp. 33–35.

T. V. Buttrey, rev. of C. H. V. Sutherland, *Roman Coins*, in *NC* 1975, pp. 235–36.

NUMISMATIC COLLECTIONS

References to published numismatic collections (BMC, SNG, etc.) are cited in abbreviated form. All abbreviated references, however, are to be clearly identified:

a. Collections published in multiple volumes with a continuous numbering system are simply noted as *SNGvAulock* 7965.

b. Other multiple volume collections must identify the appropriate subdivision in addition to the coin number (e.g. *SNGCop* Macedonia 103).

c. If the numbering system *within each volume* or part is not continuous, further divisions (such as page number, mint or emperor) must be noted (e.g. *BMCRE* 4, p. 198, no. 1235; *BMCTroas*, p. 49, no. 12 or *BMCRE* 4, Antoninus Pius 1235; *BMCTroas* Dardanus 12).

Sales catalogues are cited as follows:

Hirsch 68, 3 July 1970, 1555 (or, July 3, 1970, 1555).
Ball FPL 26, Mar. 1934, 62

When the *name of the collection* is necessary to clarify:

Naville 1, 4 Apr. 1921 (Pozzi), 1615.

ADDITIONAL MATTERS OF STYLE

1. *Transliteration*—All non-inscriptional Arabic, Chinese and Russian are transliterated in the text. For Arabic, the standard system of

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

transliteration is that of the *Encyclopedia of Islam*, 2nd ed., with the following exceptions:

a. Use j, not dj for *jīm*.
b. Use q, not ḳ, for *qāf*.
c. Do not underline digraphs such as *th*, *kh*, *sh*, etc.

For Chinese, the system of transliteration is that of R. H. Mathews, *A Chinese-English Dictionary*, rev. ed. (Cambridge, Mass., 1950); for Russian it is that of the Library of Congress (C. Beatle, *ALA Cataloging Rules for Author and Title Entries*).

2. *Greek names*—Spelling of Greek personal and place names should be consistent. (A standard reference often consulted in numismatics is *HN*.)

3. *Latin abbreviations*—Latin abbreviations are all set in roman type. However, the word *sic* is set in italic type within brackets.

4. *Italics*—Italics are used for emphasis and with unfamiliar foreign words or phrases.

5. *Tables and charts*—When tables and charts are used to convey information, the author must give attention to the physical dimensions which are limited by the size of the page. Tables are numbered and referred to in the text by that number; titles or captions should identify briefly. A note is required for data which are taken from another source. Notes to each table are separately identified by the lower-case alphabet without interruption to the sequence of notes to the text.

6. *Dates and numbers*—In general, numbers above ten are expressed in figures; to form their plural add *s* alone: 650s, not 650's. B.C. dates are all inclusive: 325–324 B.C. rather than 325–24 B.C.; the single year which is not coterminous with a single year in our calendar is noted as 325/4. "Tenth century" is always spelled out in the text; the adjectival form requires a hyphen as in "tenth-century ruler."

7. *Cross references*—Avoid cross references to specific pages within an article. When necessary such references are indicated by zeros in the text (p. 00) with the appropiate manuscript page number circled in the margin.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

LIST OF ABBREVIATIONS

AMNG — *Die antiken münzen Nord-Griechenlands*, unter leitung von F. Imhoof-Blumer (Berlin, 1898–1935).

AMUGS — Antike Münzen und Geschnittene Steine.

ANS (with suffix) — American Numismatic Society followed by the appropriate volume or series: *ANSCent* (*Centennial Publication*, ed. H. Ingholt [New York, 1958]); ANSNNM (Numismatic Notes and Monographs); ANSNS (Numismatic Studies).

Artuk — İbrahim Artuk and Cevriye Artuk, *Istanbul arkeoloji müzeleri teşherdeki islâmî sikkeler kataloğu*, 2 vols. (Istanbul, 1970, 1974).

Beamtennamen — R. Münsterberg, "Die beamtennamen auf den griechischen münzen," *NZ* 1911, p. 69; 1912, pp. 1–111; 1914, pp. 1–98; 1927, pp. 42–105.

BMC (with suffix) — The British Museum Catalogue followed by the appropriate volume: *BMCByz* (Byzantine); *BMCLycaonia*; *BMCOr* (Oriental); *BMCVan* (Vandals); *BMCRE* (Roman Empire); *BMCRM* (Roman Medallions); *BMCRR* (Roman Republic).

BNC — Paris, Bibliothèque Nationale, *Catalogue des monnaies de l'Empire romain* (Paris, 1976–).

Brett — see *MFA*

CAH — *The Cambridge Ancient History*, 12 vols. (Cambridge, Engl., 1924–39).

CERP — A. H. M. Jones, *The Cities of the Eastern Roman Provinces* (Oxford, 1937).

CIL — *Corpus Inscriptionum Latinarum* (Berlin, 1893–).

Cohen — H. Cohen, *Description générale des monnaies de la République romaine communément appelées médailles consulaires* (Paris, 1857).

CorNum — *Corolla Numismatica, Numismatic Essays in Honor of Barclay V. Head*, ed. G. F. Hill (London, 1906).

Crawford — M. H. Crawford, *Roman Republican Coinage*, 2 vols. (Cambridge, Engl., 1974).

CREAM — C. H. V. Sutherland and C. M. Kraay, *Catalogue of Coins of the Roman Empire in the Ashmolean Museum* (Oxford, 1975).

DarSag — C. Daremberg and E. Saglio, *Dictionnaire des antiquités grecques et romaines*, 5 vols. (Paris, 1875–1919).

Dattari — G. Dattari, *Numi Augg. Alexandriani* (Cairo, 1901).

de Hirsch — P. Naster, *La Collection Lucien de Hirsch* (Brussels, 1959).

de Luynes — J. Babelon, *Catalogue de la collection de Luynes*, 4 vols. (Paris, 1924–36).

DOC — *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection and in the Whittemore Collection*, 3 vols., ed. A. R. Bellinger and P. Grierson (Washington, D.C., 1966–73).

EI^2 — *Encyclopedia of Islam*, new ed., London.

ESM — E. T. Newell, *The Coinage of the Eastern Seleucid Mints*, ANSNS 1 (New York, 1938).

Essays Mattingly — *Essays in Roman Coinage Presented to Harold Mattingly*, ed. R. A. G. Carson and C. H. V. Sutherland (Oxford, 1956).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Essays Robinson — *Essays in Greek Coinage Presented to Stanley Robinson*, ed. C. M. Kraay and G. K. Jenkins (Oxford, 1968).

FMRD — *Die Fundmünzen der römischen Zeit in Deutschland* (Berlin, 1960–).

GCNAC — Greek Coins in North American Collections.

GrMünz — F. Imhoof-Blumer, *Griechische münzen* (Munich, 1890).

HCC — A. S. Robertson, *Roman Imperial Coins in Hunter Coin Cabinet*, 3 vols. (London/Glasgow/New York, 1962–77).

HN — B. V. Head, *Historia Numorum*, new ed. (Oxford, 1911).

Hunter — G. MacDonald, *Catalogue of Greek Coins in the Hunterian Collection*, 3 vols. (Glasgow, 1899–1905).

IG — *Inscriptiones Graecae*, editio minor (Berlin, 1924–40).

IGCH — *An Inventory of Greek Coin Hoards*, ed. M. Thompson, O. Mørkholm and C. M. Kraay (New York, 1973).

IGRR — *Inscriptiones graecae ad res Romanas pertinentes*, ed. R. Cagnat, 4 vols. (Paris, 1906–27).

Jameson — R. Jameson, *Collections R. Jameson, monnaies grecques antiques*, 4 vols. (Paris, 1913–32).

Kaisernamen — R. Münsterberg, "Die römischen Kaisernamen der griechischen Münzen," *NZ* 1926, pp. 1–50.

Khediv — S. Lane-Poole, *Catalogue of the Collections of Arabic Coins Preserved in the Khedivial Library in Cairo* (London, 1897).

KlMünz — F. Imhoof-Bloomer, *Kleinasiatische münzen*, 2 vols. (Vienna, 1901–2).

Lavoix — H. Lavoix, *Catalogue des monnaies musulmanes de la Bibliothèque Nationale*, 3 vols. (Paris, 1887, 1891, 1896).

LSJ — *A Greek-English Lexicon*, 2 vols., new ed., comp. H. G. Liddell, R. Scott and H. S. Jones (Oxford, 1940).

LSJSuppl — H. G. Liddell, R. Scott and H. S. Jones, *A Greek-English Lexicon, A Supplement*, ed. E. A. Barber (Oxford, 1968).

McClean — S. W. Grose, *Catalogue of the McClean Collection of Greek Coins*, 3 vols. (Cambridge, Engl., 1923–29).

Mélanges — E. Babelon, *Mélanges numismatiques*, 4 vols. (Paris, 1892–1912).

MFA — A. B. Brett, *Catalogue of Greek Coins, Museum of Fine Arts* (Boston, 1955).

MIB — W. R. O. Hahn, *Moneta Imperii Byzantinii* (Vienna, 1973–).

Mionnet — T. E. Mionnet, *Description de médailles antiques, grecques et romaines*, 7 vols. (Paris, 1806–13).

MonnGr — F. Imhoof-Blumer, *Monnaies grecques* (Amsterdam, 1883).

Münsterberg — see Beamtennamen and Kaisernamen.

OGIS — *Orientis Graeci inscriptiones selectae*, ed. W. Dittenberger (Hildesheim, 1960).

RE — *Pauly's Real-Encyclopädie der Klassischen Altertumswissenschaft*, Neue Bearbeitung herausgegeben von Georg Wissowa (Stuttgart, 1894).

RGA — W. H. Waddington, *Recueil général des monnaies d'Asie Mineure*, 4 fasc., cont. and comp. E. Babelon and T. Reinach (Paris, 1904–12).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

RIC — H. Mattingly and E. A. Sydenham, *The Roman Imperial Coinage*, 9 vols. (London, 1968).

RRAM — D. Magie, *Roman Rule in Asia Minor* (Princeton, 1950).

RRCH — M. H. Crawford, *Roman Republican Coins Hoards* (London, 1969).

Sabatier — J. Sabatier, *Description générale des monnaies byzantines*, 2 vols. (Paris, London, 1862).

SEG — *Supplementum Epigraphicum Graecum* (Leiden, 1924).

SEH — M. Rostovtzeff, *The Social and Economic History of the Hellenistic World*, 3 vols. (Oxford, 1941).

SEHRE — M. Rostovtzeff, *The Social and Economic History of the Roman Empire* (Oxford, 1926).

SIG — *Sylloge Inscriptionum Graecarum*, ed. W. Dittenberger, 3rd ed. (Leipzig, 1915–24).

SNG (with suffix) — *Sylloge Nummorum Graecorum* followed by the appropriate volume: *SNGANS* (American Numismatic Society); *SNGvAulock* (von Aulock); *SNGCop* (Copenhagen); *SNGFitz* (Fitzwilliam Museum).

Syd — E. A. Sydenham, *The Coinage of the Roman Republic* (London, 1952).

Tolstoi — J. Tolstoi, *Monnaies byzantines*, 4 vols. (St. Petersburg, 1912–14).

Traité — E. Babelon, *Traité des monnaies grecques et romaines*, 4 vols. (Paris, 1901–32).

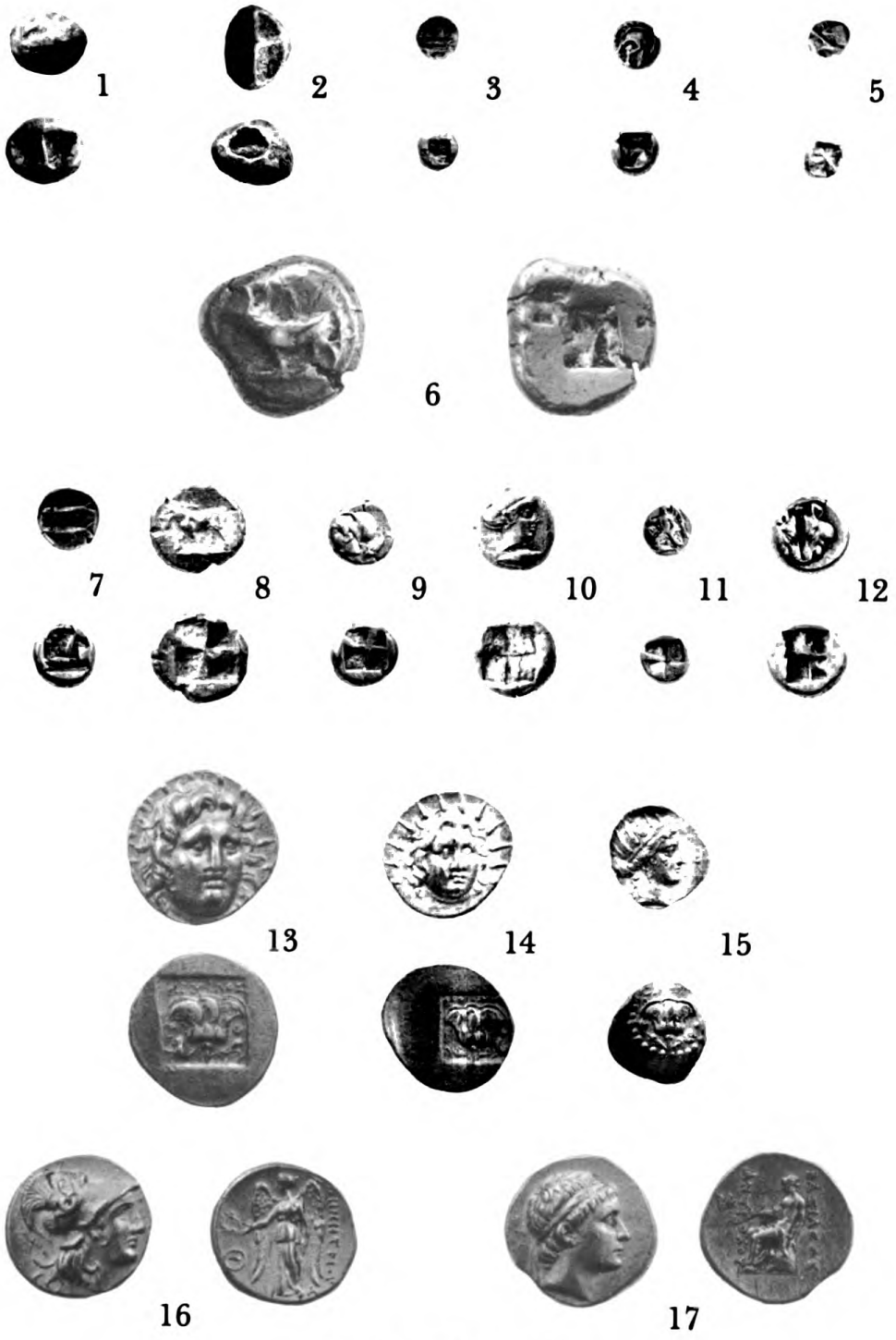
Waddington — E. Babelon, *Inventaire de la collection Waddington* (Paris, 1897).

Weber — L. Forrer, *Descriptive Catalogue of the Collection of Greeks Coins Formed by Sir Hermann Weber*, 3 vols. (London, 1922–29).

WSM — E. T. Newell, *The Coinage of the Western Seleucid Mints*, ANSNS 4 (New York, 1941).

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Plate 1



Kelley Bequest

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 2



18 19 20



21 22 23





24 25 A

Kelley Bequest

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 3



26



27



B



28





29



30



31



32









Kelley Bequest

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 4



33





34





35



36



37









38



39



40







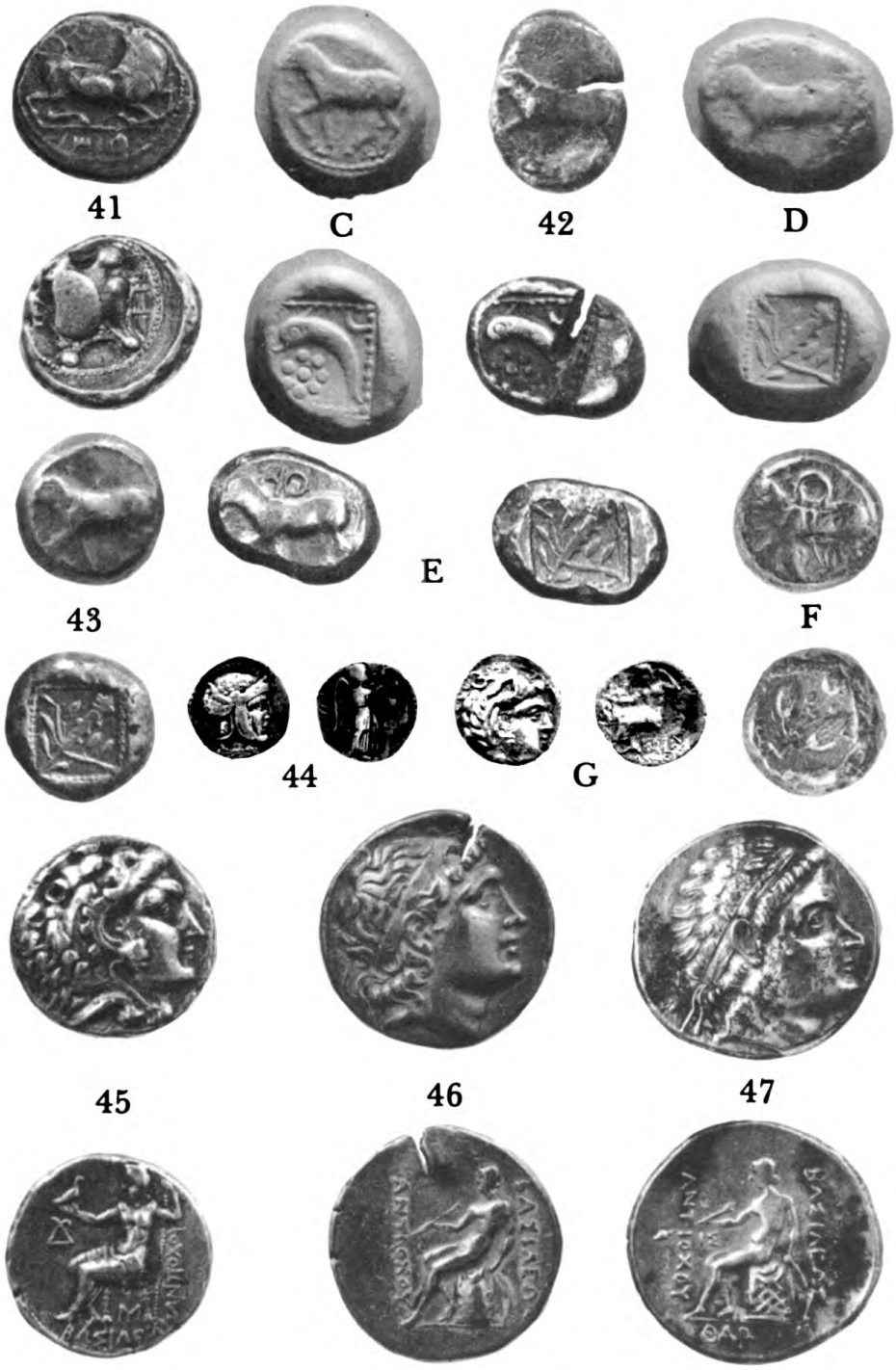
Kelley Bequest

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 5



41 C 42 D

43 E F

44 G

45 46 47

Kelley Bequest

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 6



48



49



50









51



52



53







Kelley Bequest

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 7



3 9-12 21-24

27 29 30-32

33

Ptolemaic Hoard

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 8



Seleucid Mint at Lampsacus

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

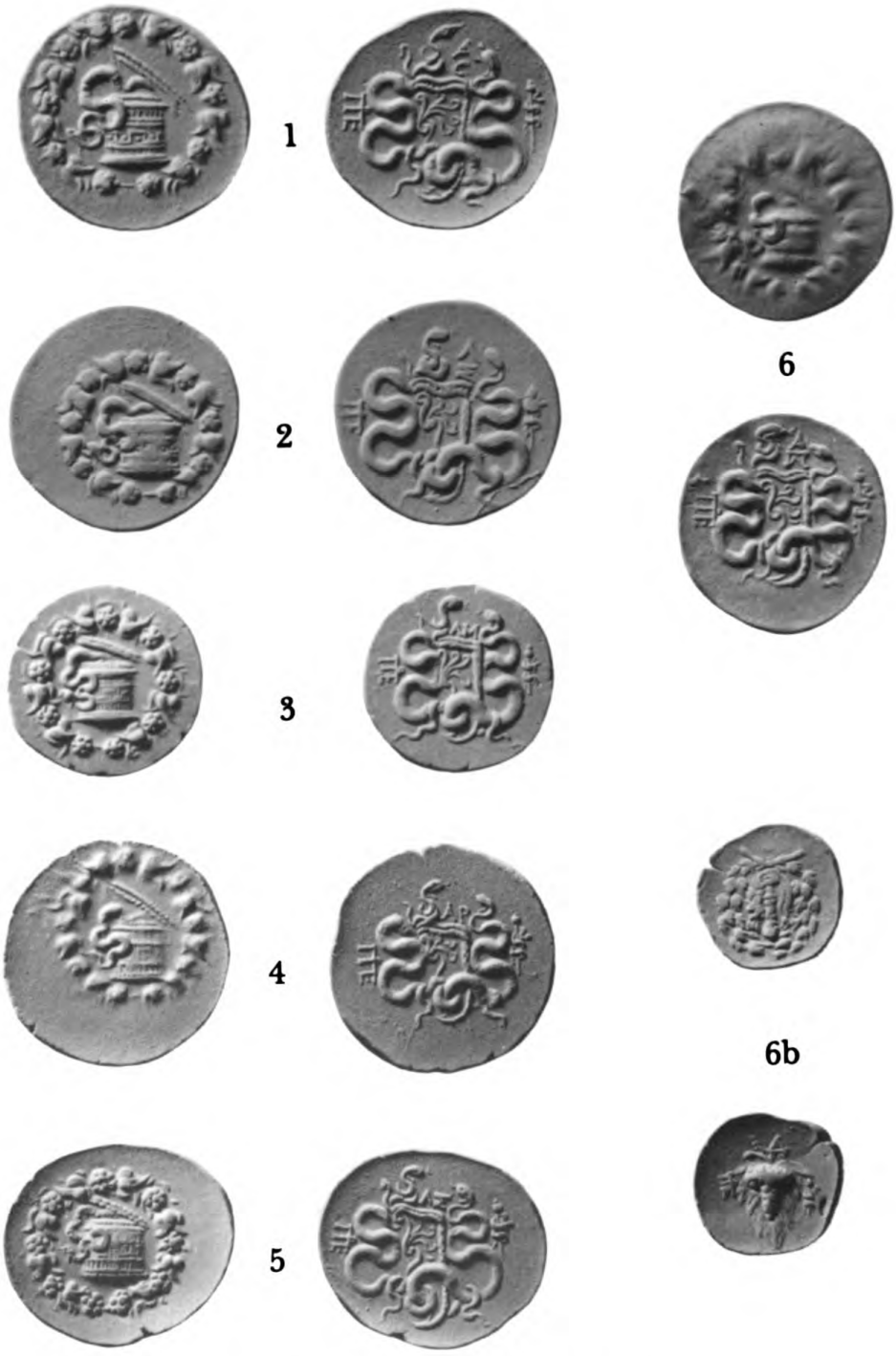
Plate 9



Pamphylian Alexanders

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

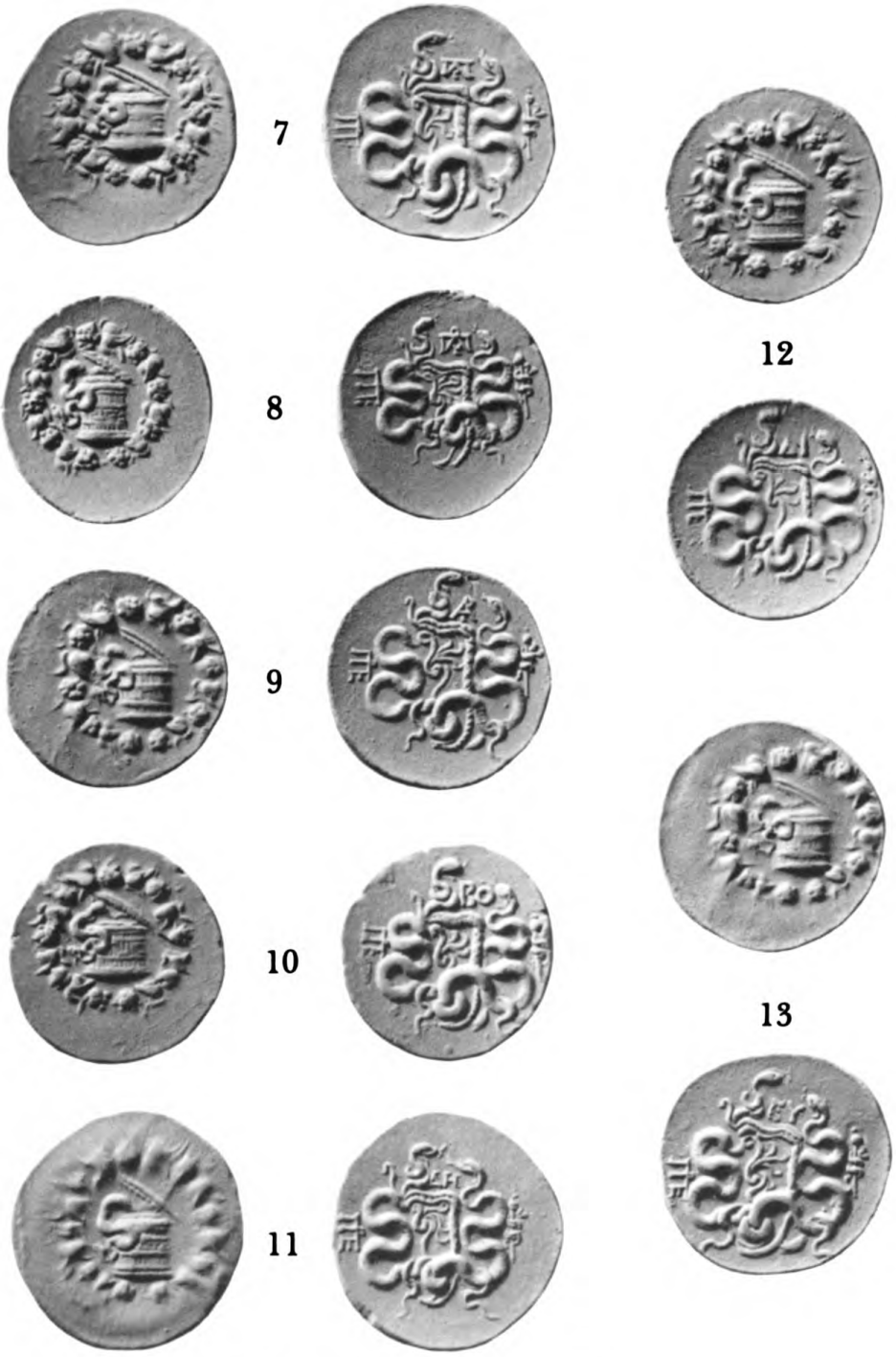
Plate 10



Late Cistophori of Pergamum

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

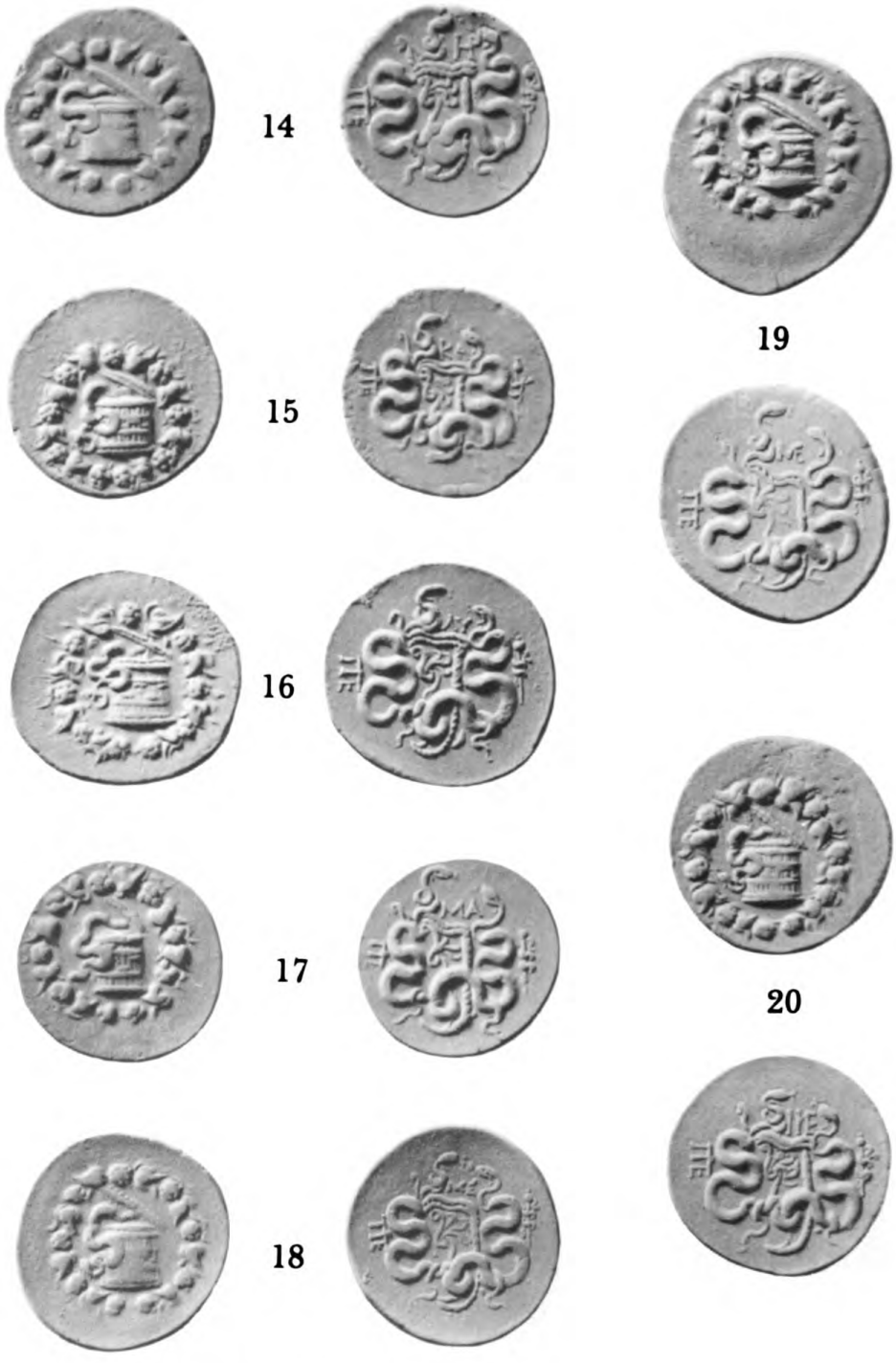
Plate 11



Late Cistophori of Pergamum

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 12



Late Cistophori of Pergamum

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 13



20a







21



24





22







23



25





23b



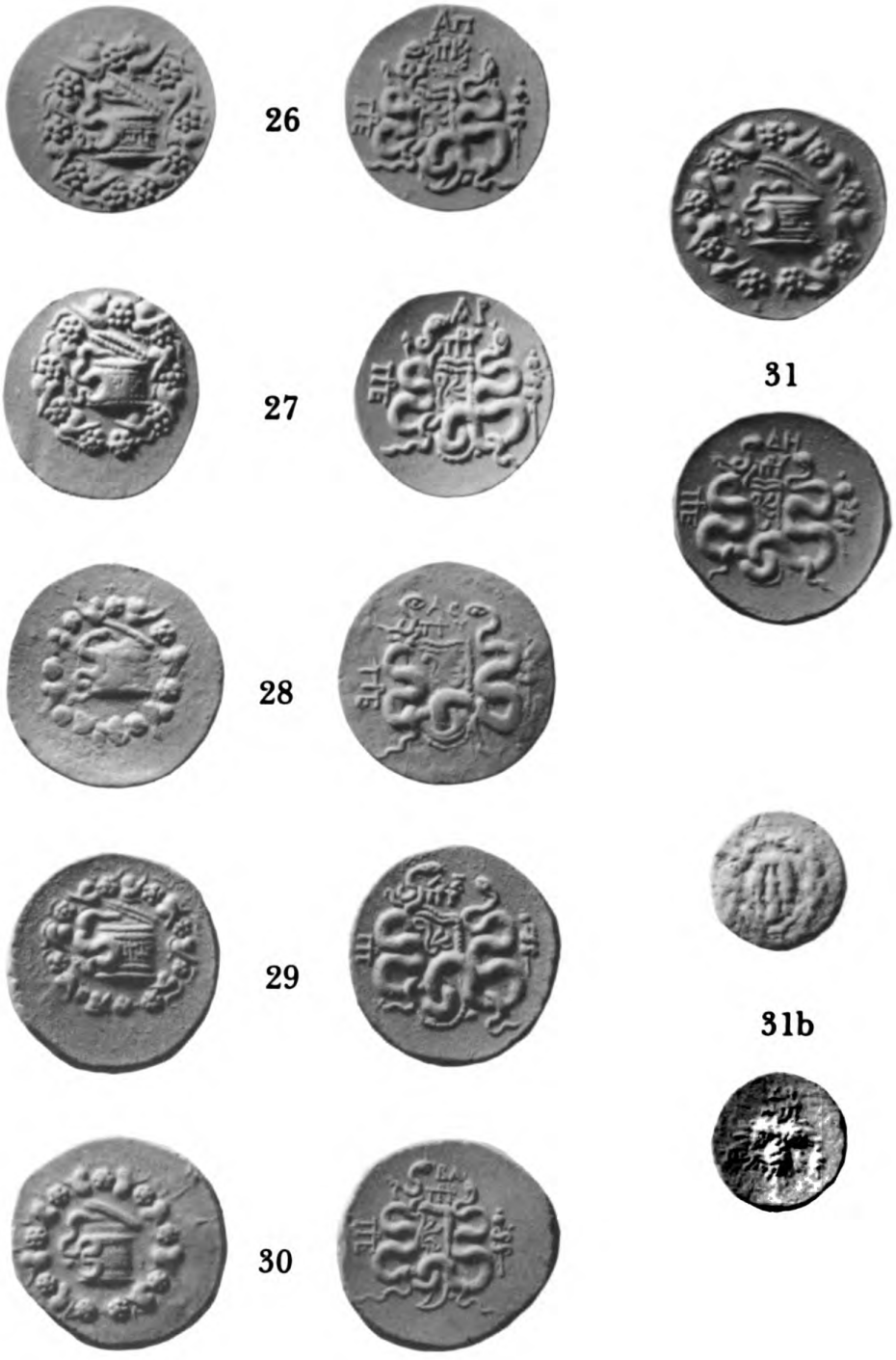
Late Cistophori of Pergamum

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

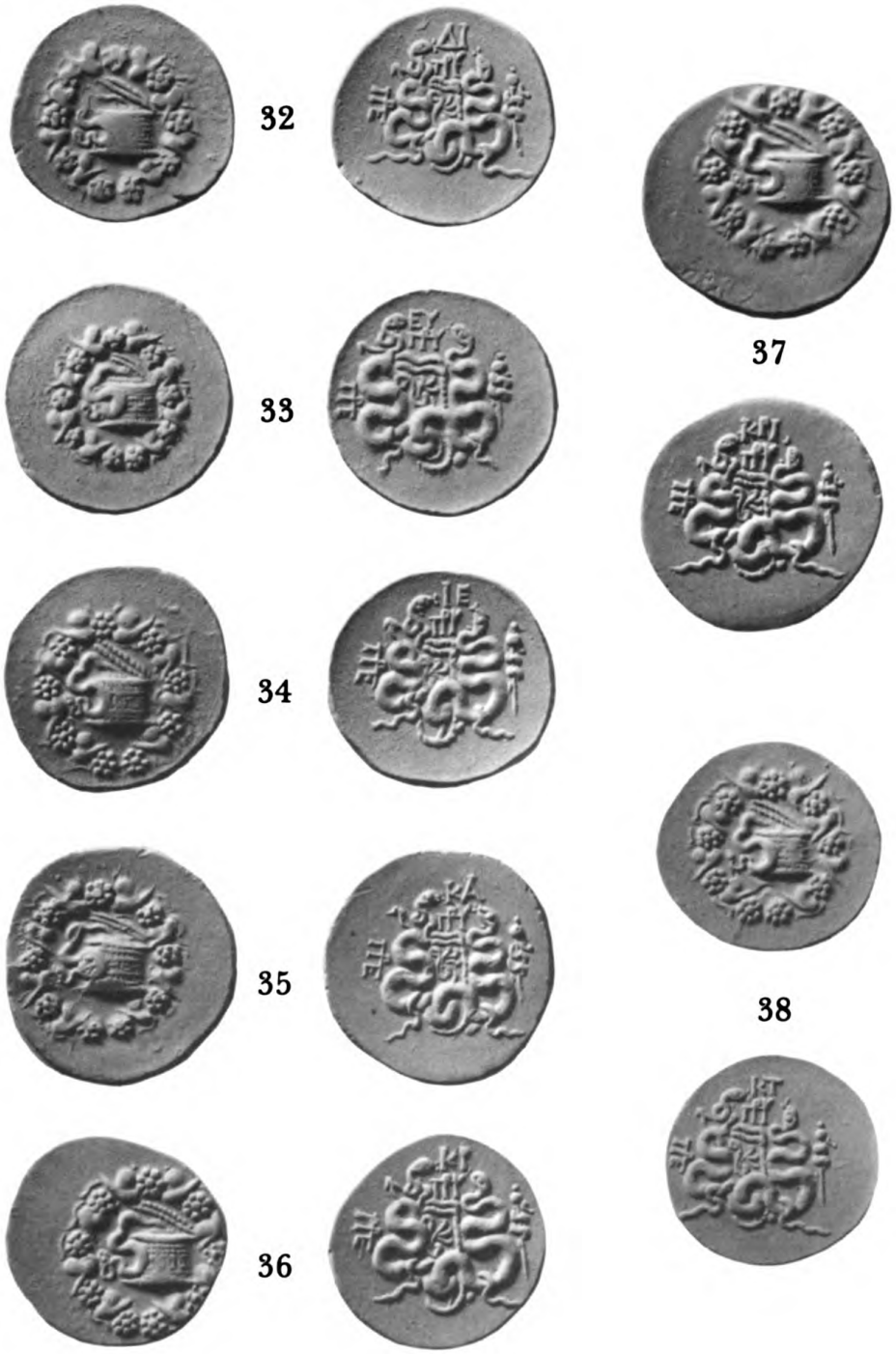
Plate 14



Late Cistophori of Pergamum

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

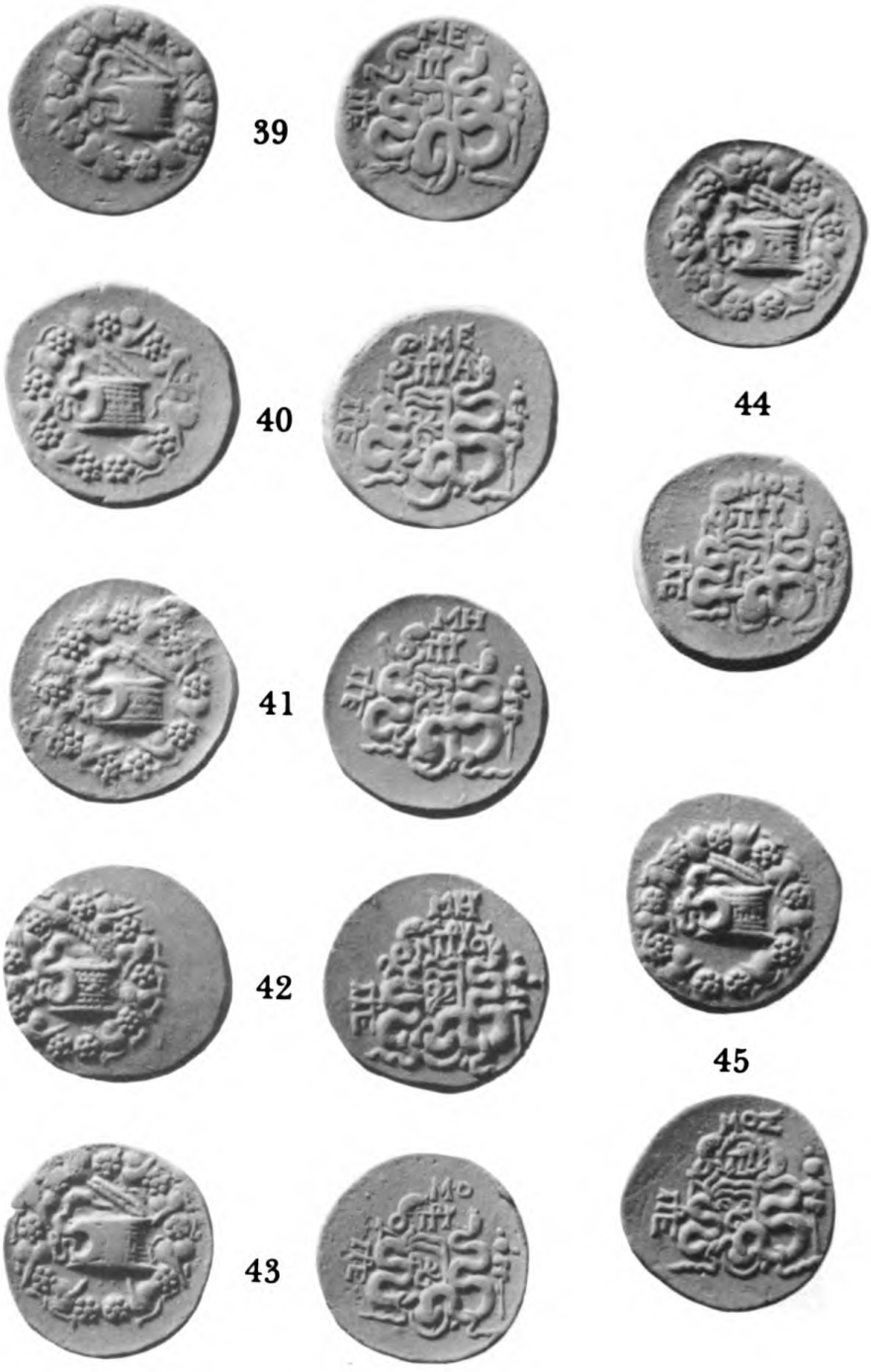
Plate 15



Late Cistophori of Pergamum

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

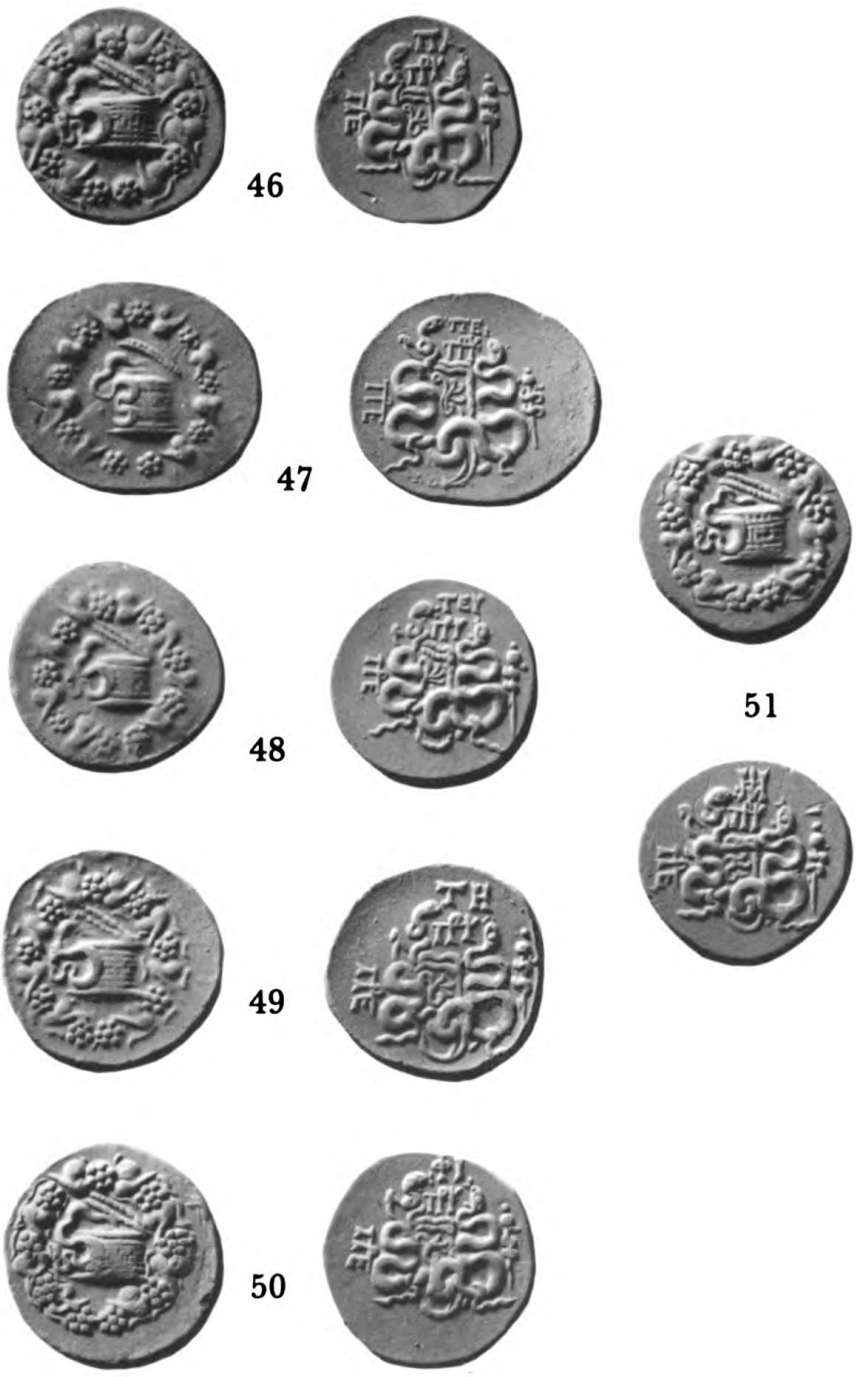
Plate 16



Late Cistophori of Pergamum

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 17



Late Cistophori of Pergamum

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 18



1

2

Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 19



Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 20



Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 21



Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 22



14

15

16

17

Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 23



18



19

Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 24



20





21





22



Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 25



23

24

25

26

Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 26



27

28

28

29

Posthumous Hadrianic Medallions

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 27


T3a


T3a


T9a


T15


5


7


12


28


T22


T25a


T25b


V3a


T26


14


33a


33b


34a


35a


T28a


T38


T46a


T46b


37a


47a

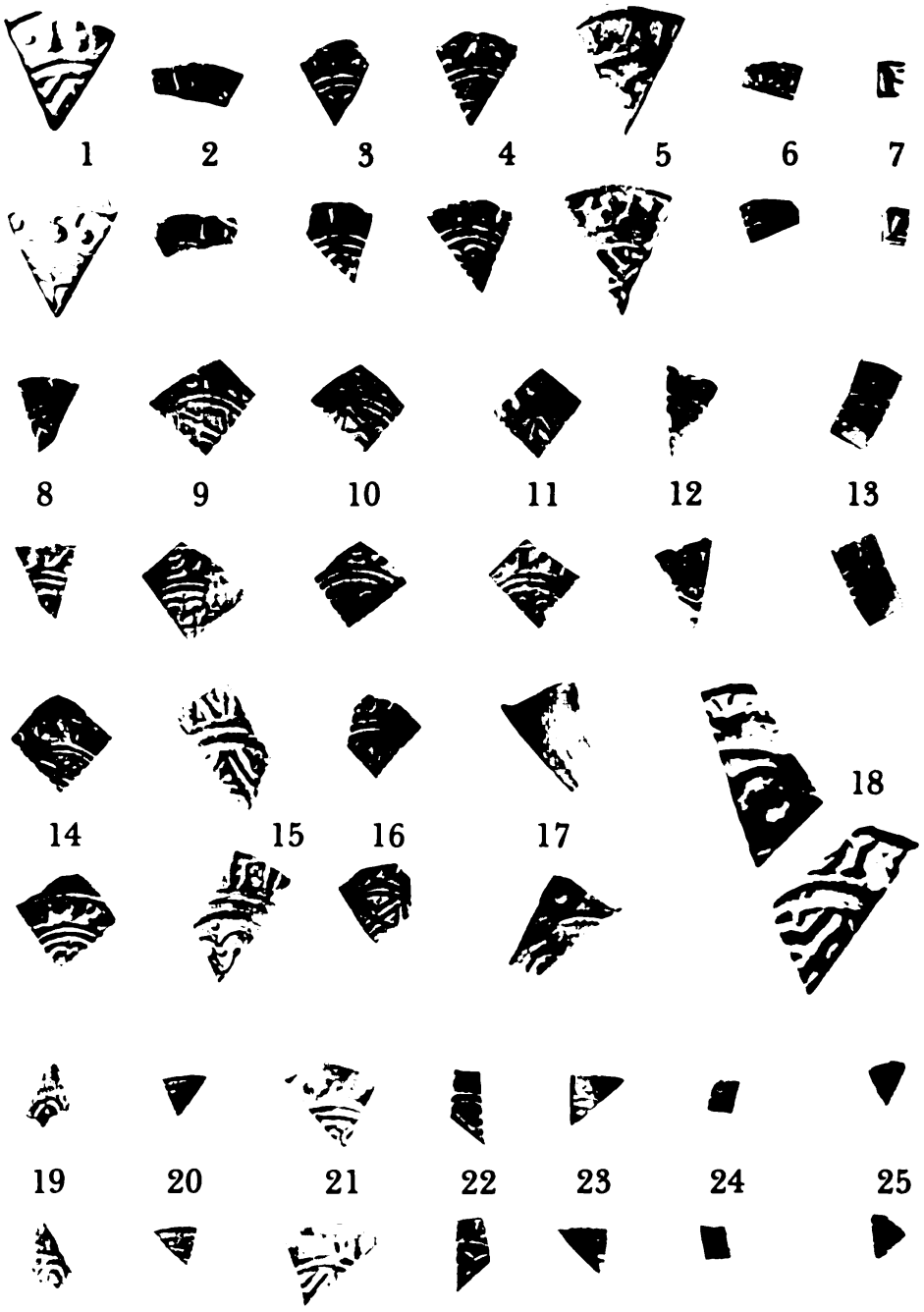

61a


61b

Antioch Hoard—Supplement

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

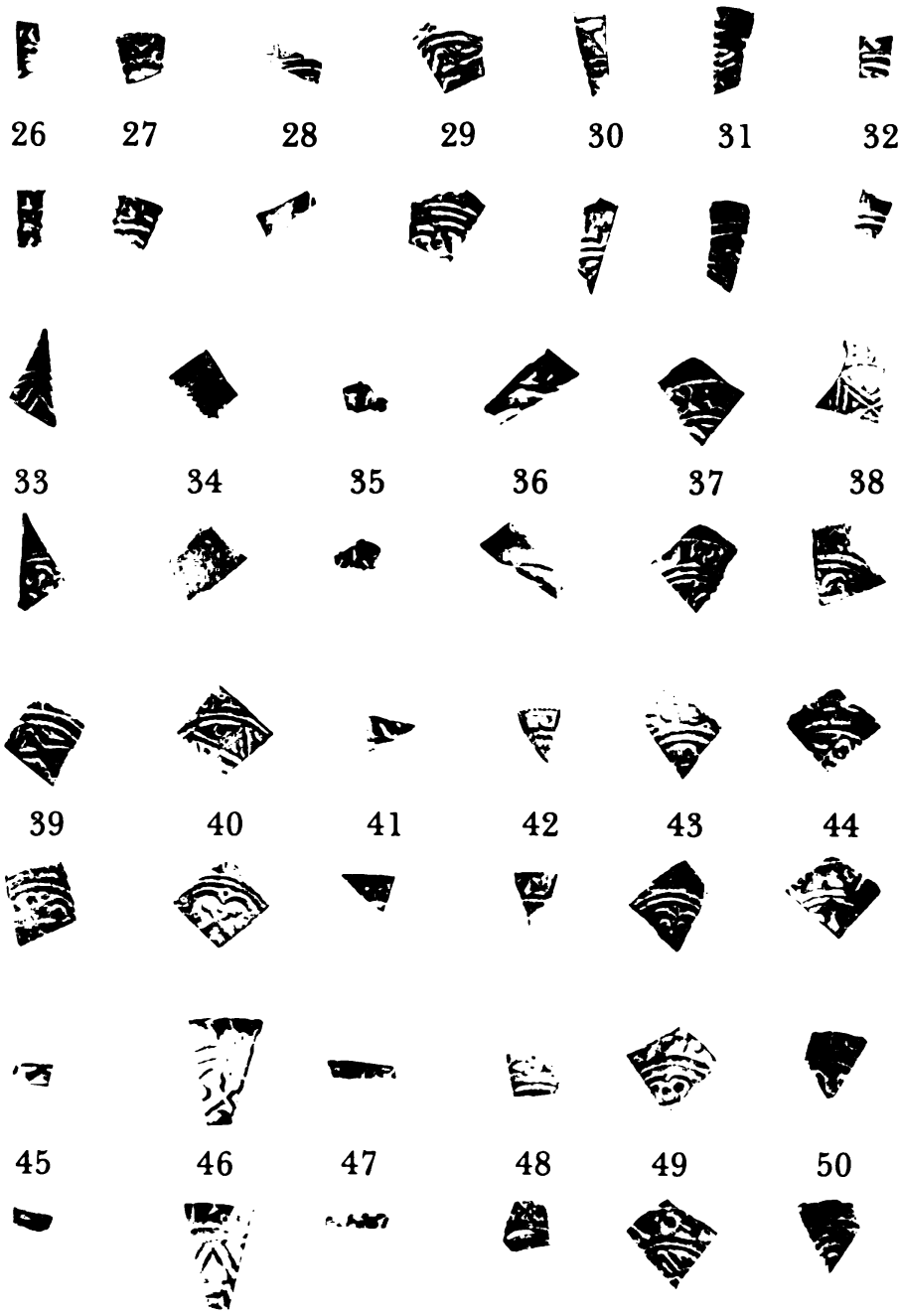
Plate 28



Latin Gold Coinage

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

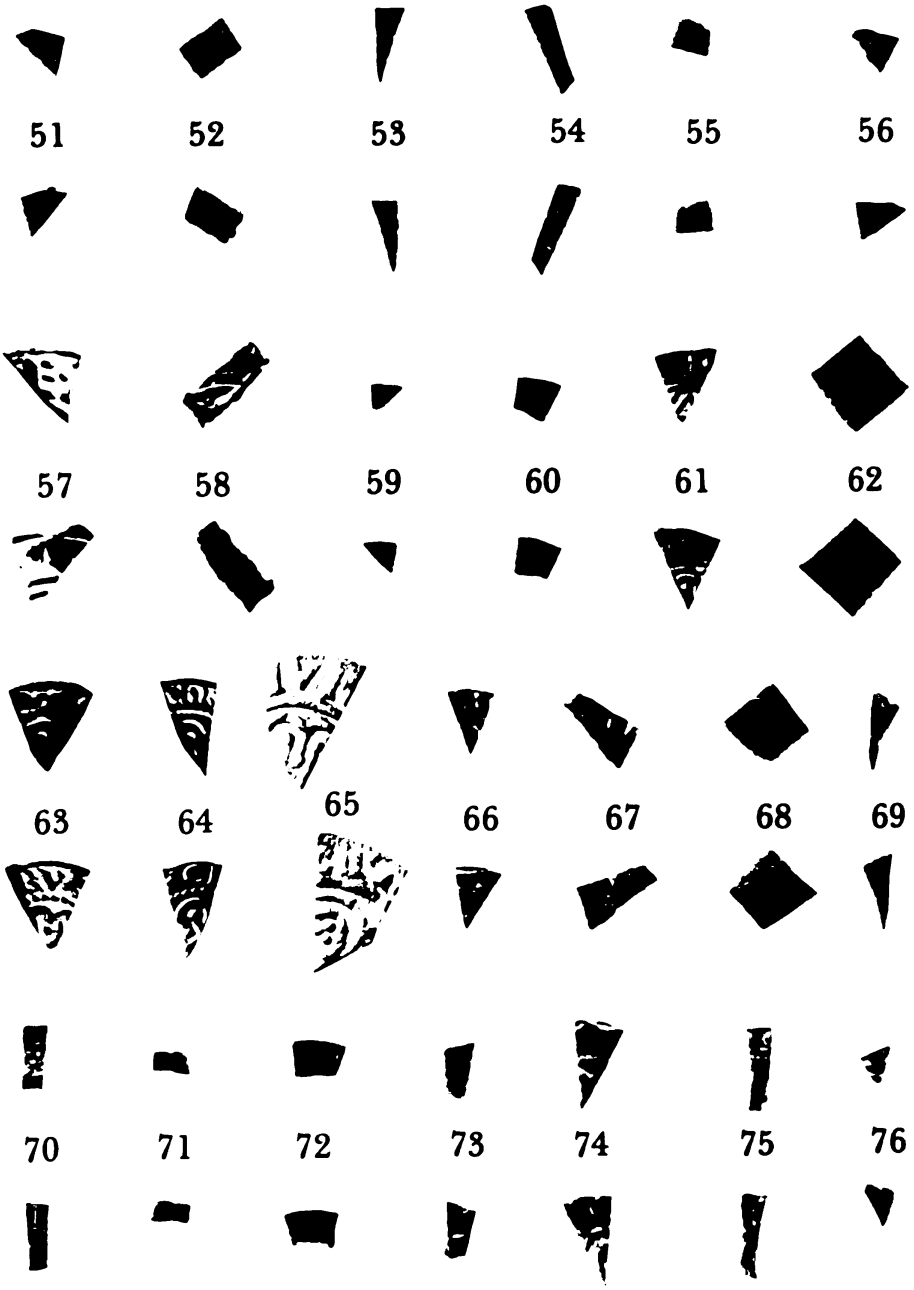
Plate 29



Latin Gold Coinage

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

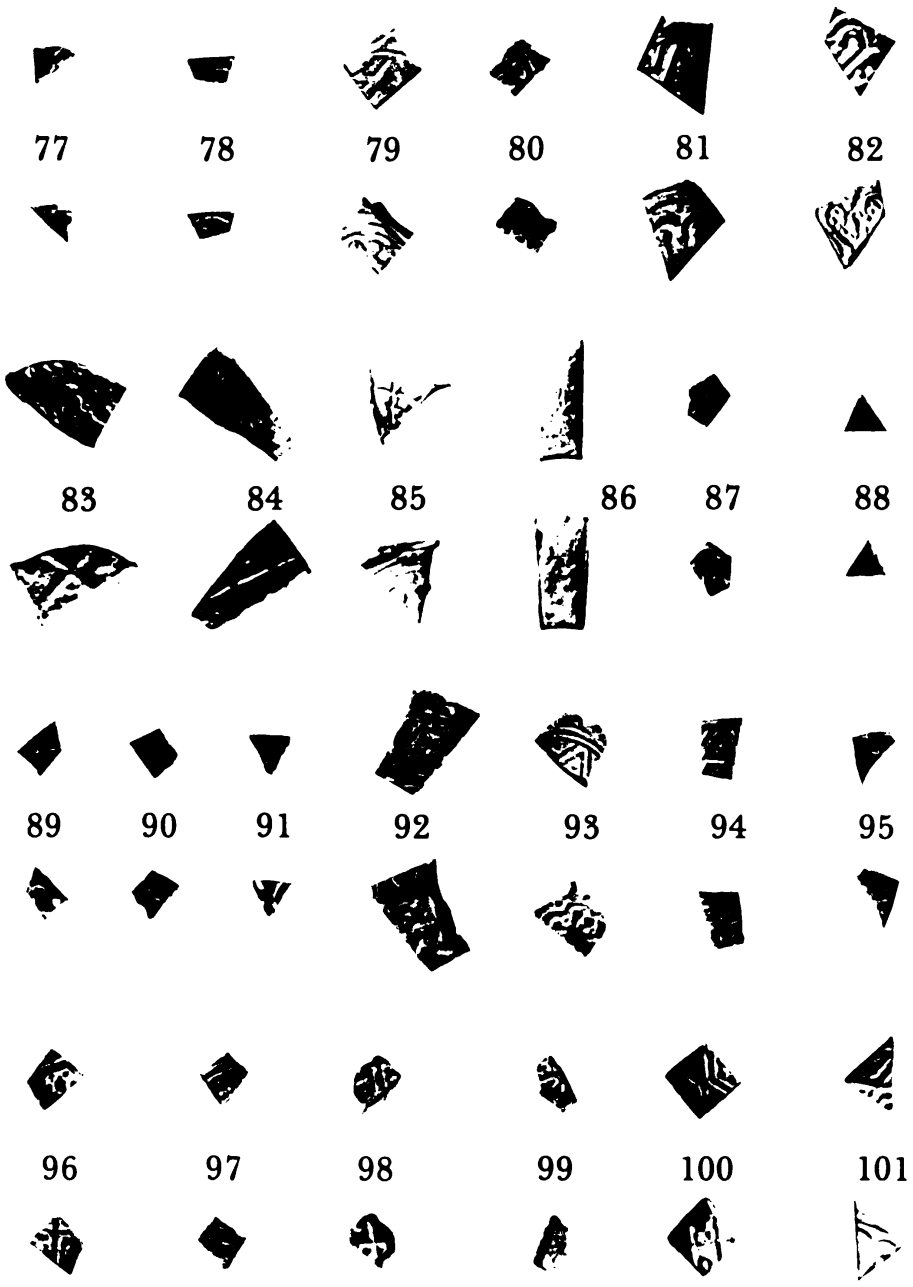
Plate 30



Latin Gold Coinage

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

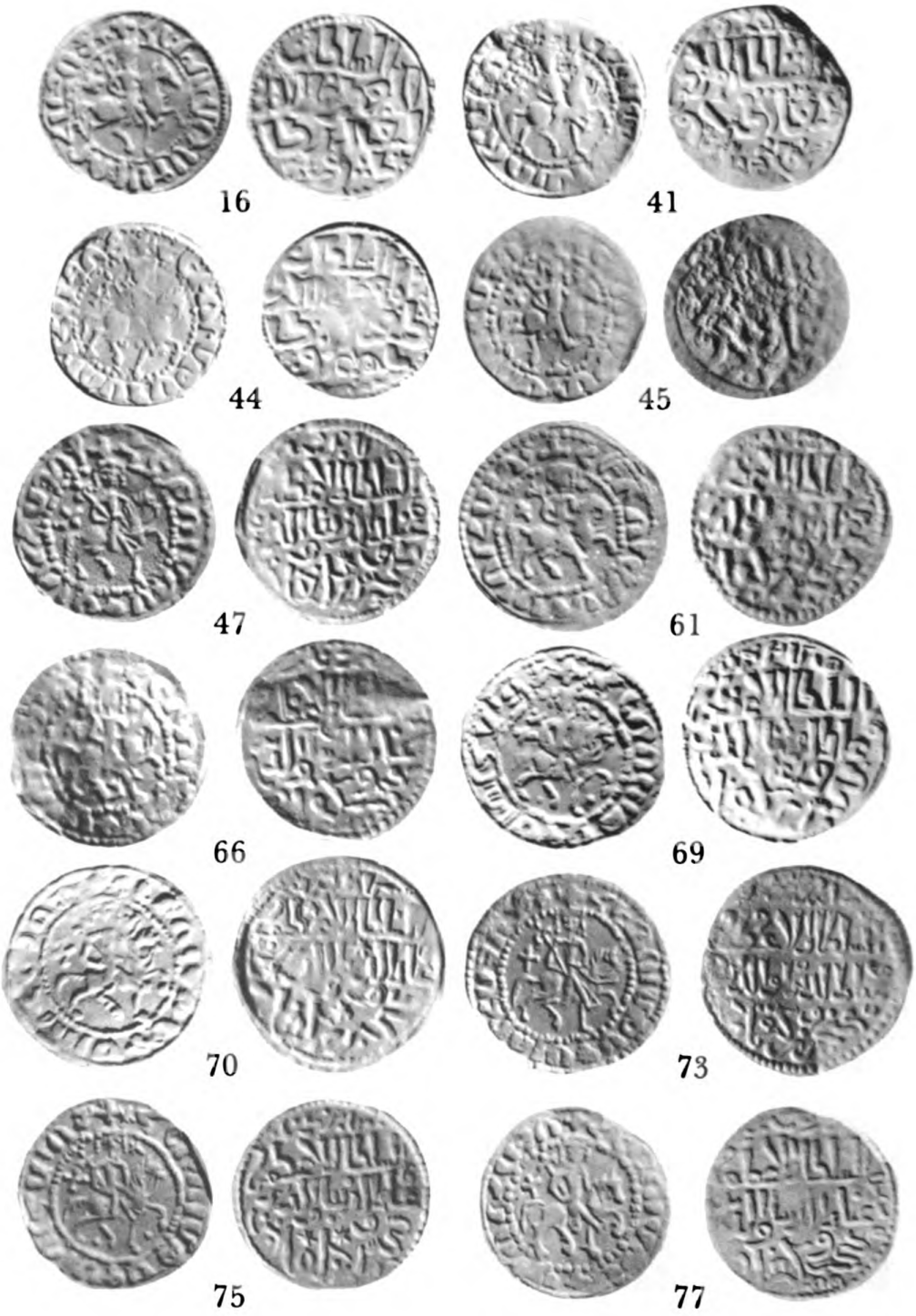
Plate 31



Latin Gold Coinage

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 32



Bilingual Trams

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 33



Bilingual Trams

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 34



Bilingual Trams

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 35


270

271


273 275


279 283


287 292


293 294


295 299

Bilingual Trams

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 36



1



2



3



4



6



7



9



10



12

Late Umayyad Revolutionary Coinage

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 37



15



17



18



23



25



26



27



28





45

Late Umayyad Revolutionary Coinage

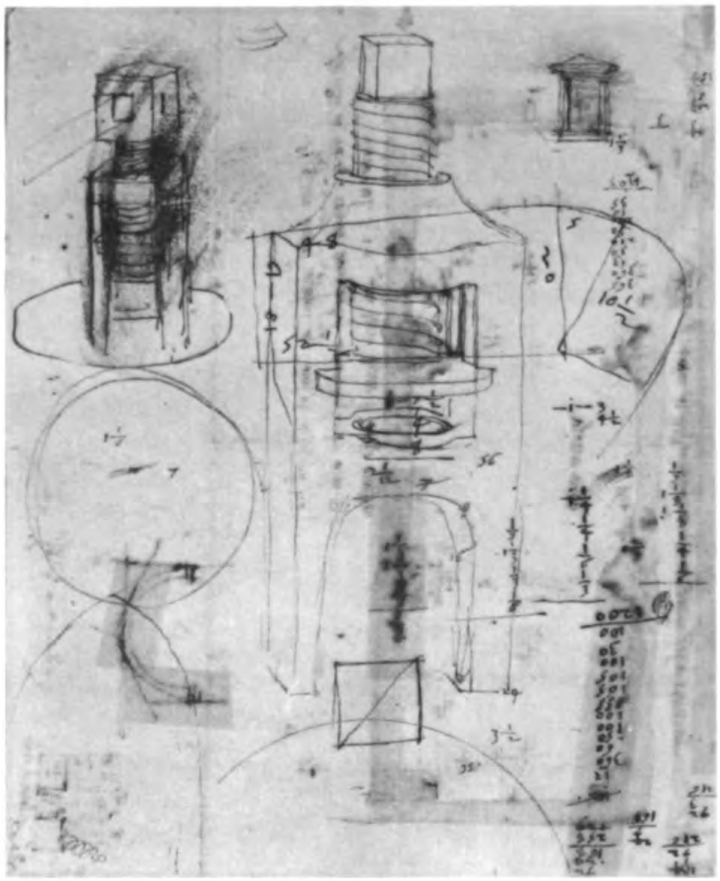
Digitized by Google

Original from UNIVERSITY OF MICHIGAN

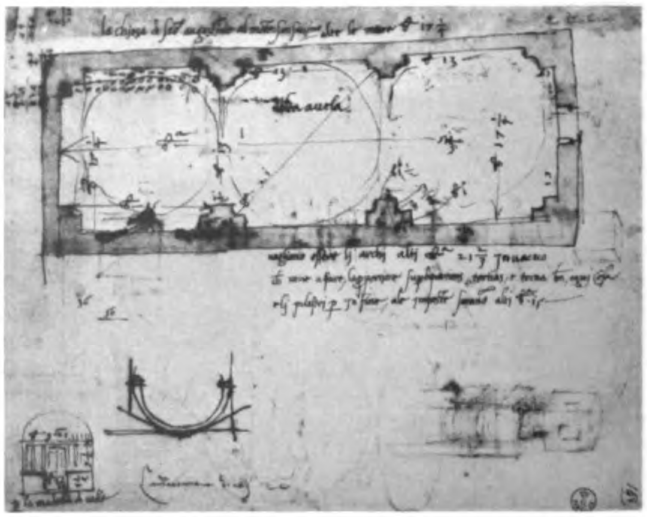
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 38

1



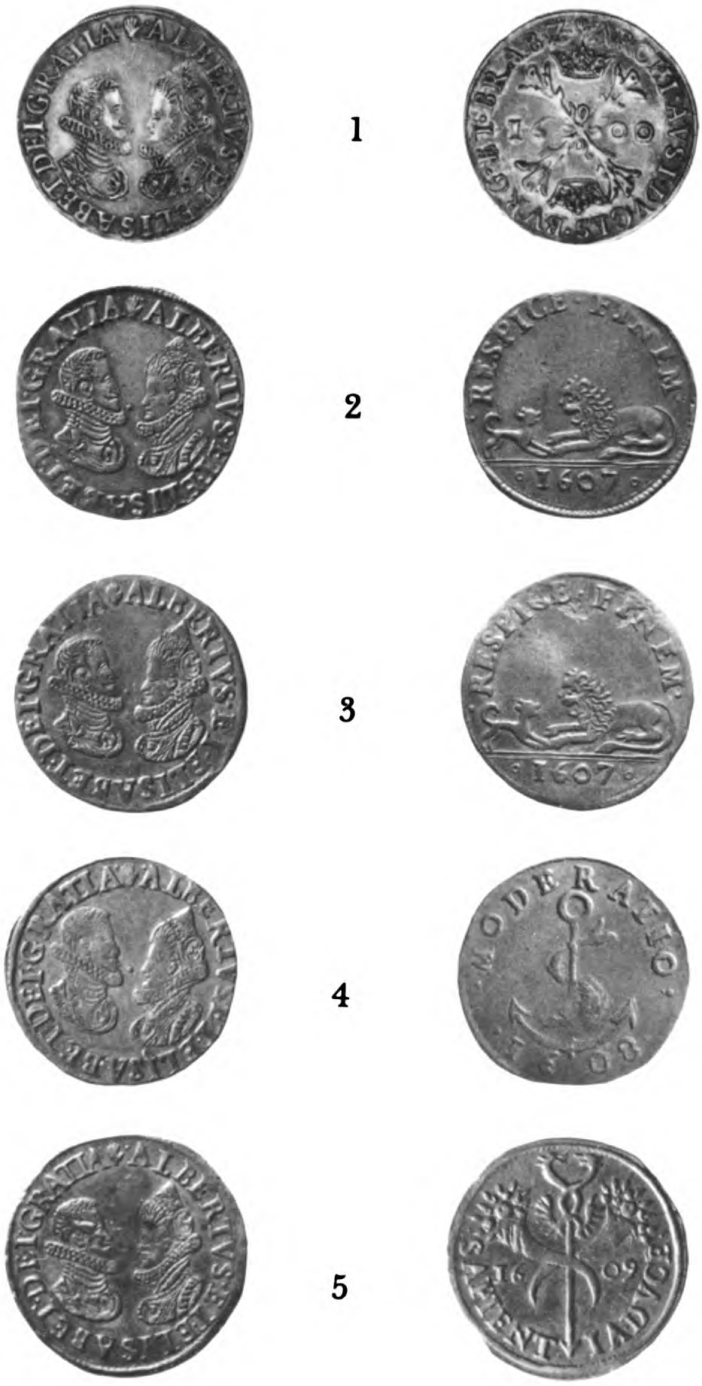
2



Peruzzi's Screw Press

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 39



Essai Quarter-Florin

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Plate 40



1
(½ x)



2
(½ x)

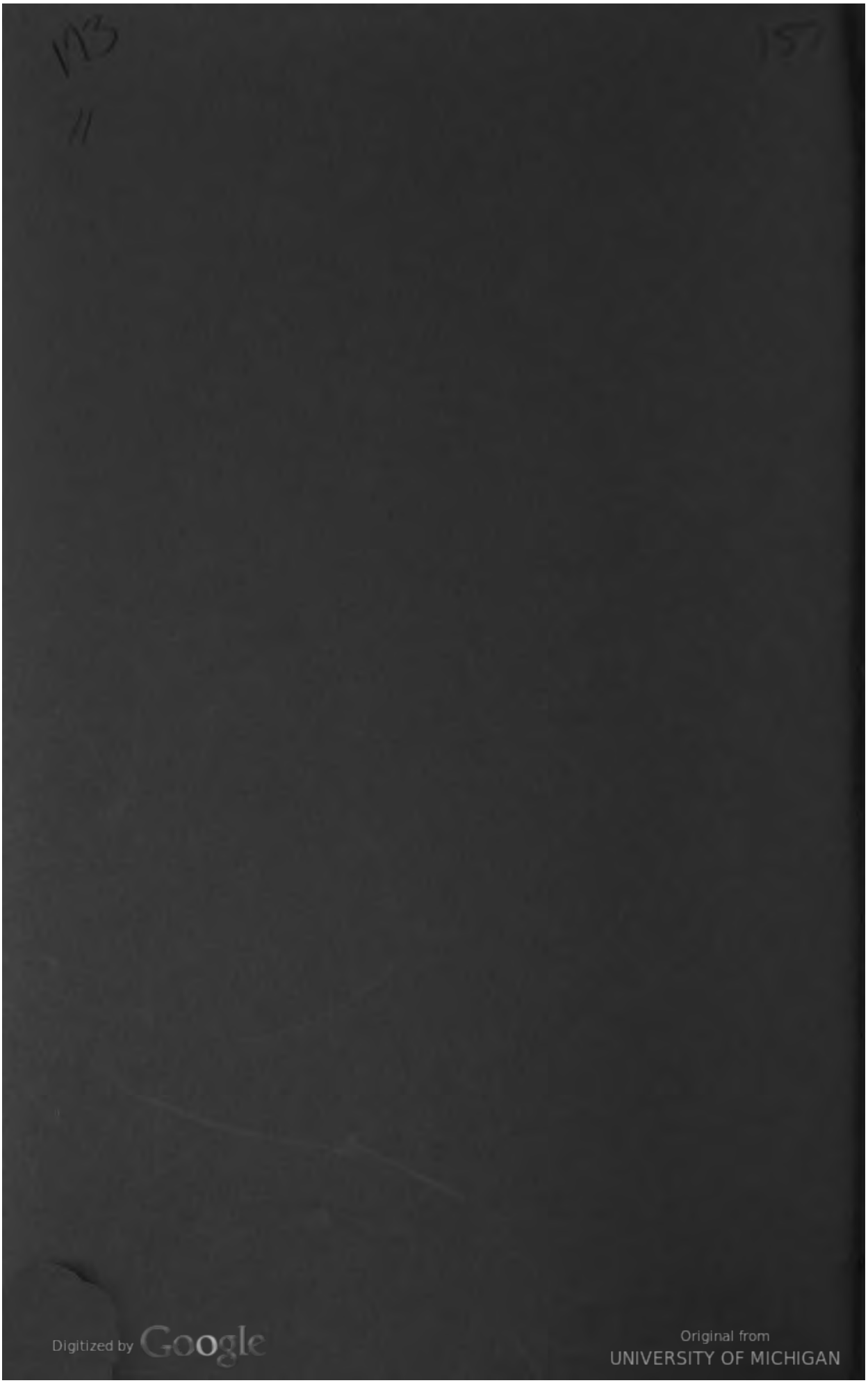


3
(½ x)

Karl Goetz

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google
Original from
UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

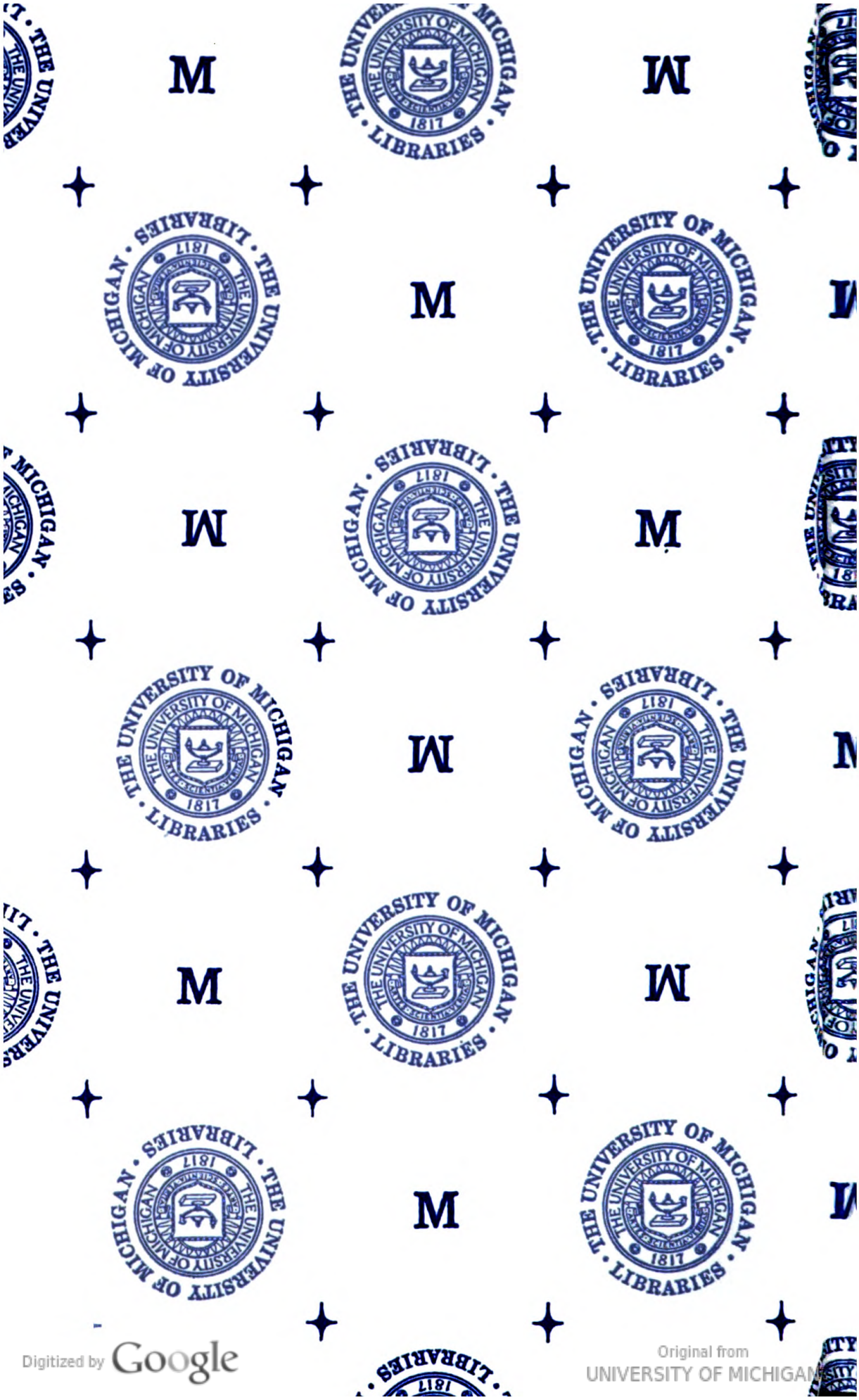
Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0

Digitized by Google

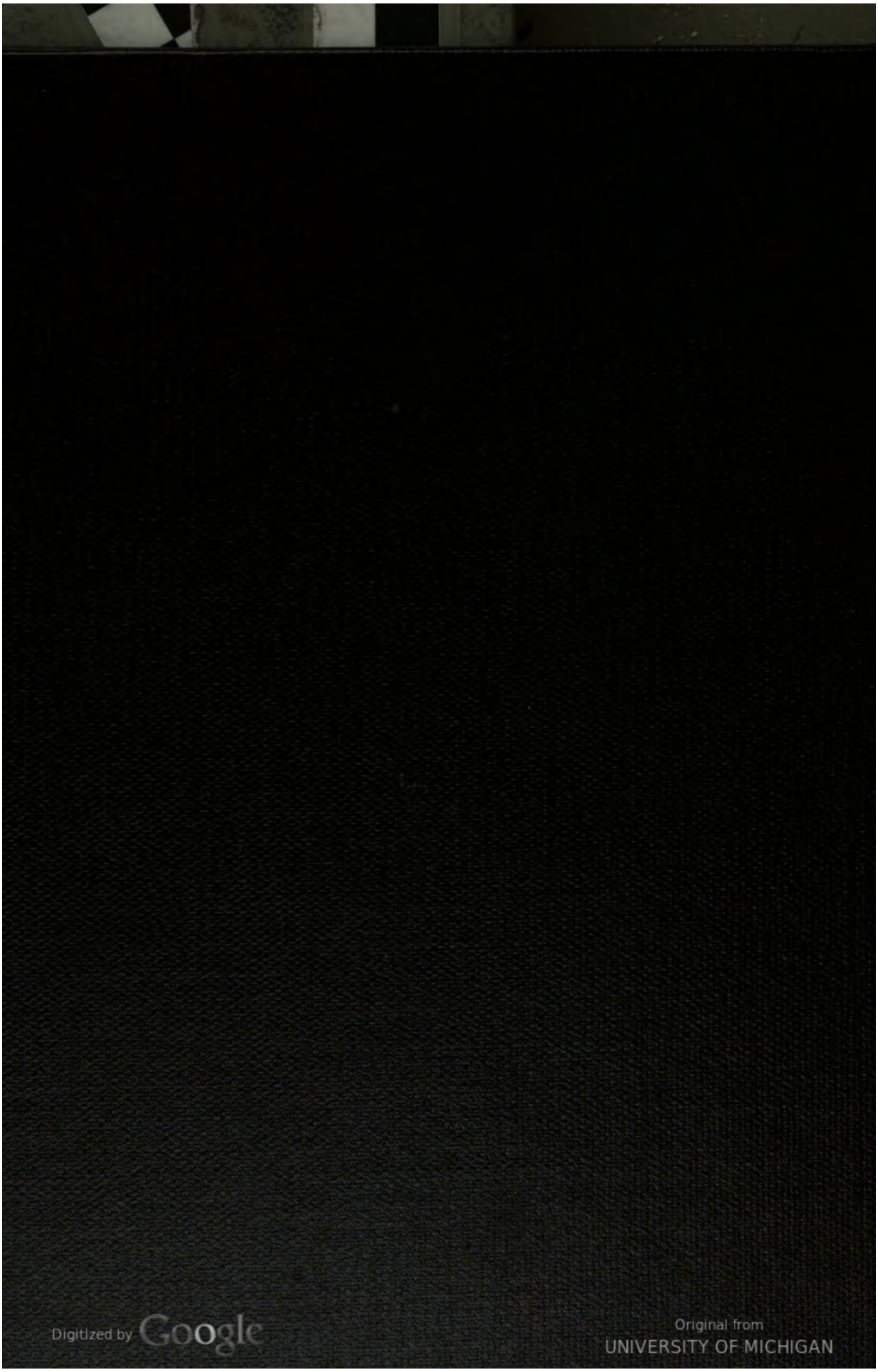
Original from
UNIVERSITY OF MICHIGAN



Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0



Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0


Digitized by Google
Original from
UNIVERSITY OF MICHIGAN
Generated on 2016-04-24 17:48 GMT / http://hdl.handle.net/2027/mdp.39015005373835
Creative Commons Attribution-NonCommercial-ShareAlike / http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0